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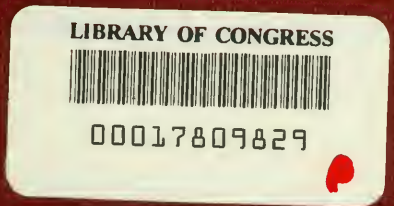

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1800

John Stanly

MEMOIR

ON THE

INTERNAL IMPROVEMENTS CONTEMPLATED BY THE LEGISLATURE OF

NORTH-CAROLINA;

AND ON THE

RESOURCES AND FINANCES

OF THAT STATE.

Archibald D. Murphey

RALEIGH:

PRINTED BY J. GALES.

1819.

TO

JOHN BRANCH, ESQUIRE,

Governor of the State of North-Carolina,

This Memoir is respectfully inscribed,

By his Friend,

A. D. MURPHEY.

November, 1819.

INTRODUCTION.

FOR thirty years past, the climate and soil of North-Carolina have been much underrated, and at no time have her physical resources been understood. She has sent half a million of her inhabitants to people the Wilderness of the West; and it was not until the rage for emigration abated, that the public attention was directed to the improvement of those advantages, and to the appreciation of those blessings, which Providence has planted in abundance within her own bosom. The delusion in favor of new Countries, which has drained our population, is passing away; good sense is returning, and we are beginning seriously to reflect how we may make our fortunes *here*, instead of going to hunt for them in a Wilderness six hundred or a thousand miles distant. This good sense brings with it a love for the State and a desire to honor her by generous efforts to unfold her physical and moral capacities—Our attention has so long been directed to the country to the West, that we are astonished to find how little we know of North-Carolina; and still more astonished to look back and see how indifferent we have been to procure information. It is with shame we now reflect that only a few years ago, the General Assembly refused to aid two enterprising individuals to compile a Map of the State; and that had it not been for the generous aid of two Gentlemen, David Stone and Peter Browne, Esquires, (to whom this Map is dedicated) it would not have been compiled. It is mortifying to look around and witness the general ignorance which prevails of the resources and character of the State: to see, both in the Legislature and out of it, men of respectable understanding, almost totally ignorant of our Geographical Situation, of the state of our Population, our Finances, our Agriculture, our Commerce, our Soil and our Climate—We thank Heaven that a change is taking place, and that we begin to be as anxious to acquire a knowledge of our resources and of our capacities for improvement, as we have heretofore been indifferent. In proportion as this knowledge shall be acquired, will our respect for North-Carolina be increased; and our resolutions strengthened to rear up her prosperity and character by a bold and vigorous system of policy—The late war first roused us to active exertion

The enthusiasm with which that event inspired us, gave admittance to liberal ideas. The Legislature of 1815, availed themselves of this enthusiasm to commence a system of policy, which had for its object the prosperity and greatness of the State. They spread abroad a zeal, which distinguished in a peculiar manner the Legislature of 1816. They directed the public attention to the improvement of our internal condition: To the opening of new channels of intercourse: To the construction of good roads, to the opening of our rivers, to the improvement of our inlets, to the concentration of our commerce, and the growth of markets at home for the productions of our soil—It remains to be seen whether subsequent Legislatures will foster the zeal which has been excited; will lead on the State to respectability and greatness; or suffer us to sink back into our former apathy, and once more to merit the cold neglect of the General Government, and the reproach and contempt of our Sister States.

When it is recollected that since the year 1815, the Legislature have resolved to educate at the public expense the Daughter of Captain Blakely and the Son of Colonel Forsyth, in gratitude for the devotion of those gallant men in their country's service; that a superb Statue of the Father of our Country should be procured from the Chisel of the first Artist in the World; that public Education should be more diligently attended to; that liberal appropriations should be made for Internal Improvements: that our inlets, and our rivers should be surveyed: that a Principal Civil Engineer should be employed to direct the public Works of the State; we have reason to hope that our character is advancing; that we stand committed not only to ourselves, but to our neighbors, to persevere in the honorable career upon which we have entered.

Men must learn political truths in the school of experience. Such is their obstinacy, that they will learn these truths no where else. The events of the year 1819, have taught us lessons of the most impressive character. If we do not profit by them, we deserve to be lashed still more severely. It is true the distress in pecuniary matters which now prevails in this State is not attributable to one cause only; but it is obvious to a common observer that the greatest and most operative cause of this distress is the scattered condition of our commerce, and the want of a home market. Having no commercial city in which the staples of our soil can be exchanged for foreign merchandize, our Merchants purchase their Goods and contract their debts in Charleston, Petersburg, Baltimore, Philadelphia and New-York. Part of those debts are discharged

by shipments of produce: the balance in cash. Once in every year the State is literally drained of its money to pay debts abroad. Our Banks not being able to do as extensive business by Bank credits as is done in large commercial cities, are compelled to isssue and throw into circulation their notes to meet the demands of commerce. These notes collected in immense numbers in other States are returned upon our Banks for specie; and the Banks are compelled not only to curtail their discounts and press their dealers, that they may call in their notes; but upon emergencies to suspend specie payments—The consequence is that their notes depreciate, and merchants having to make remittances to other States, sustain the most serious losses—No blame is to be attached to the Banks: they have not issued more paper than the ordinary demands of our commerce require: the evil lies in the condition of the State; a condition which, in the first place, induces the merchants to contract their debts in other States, and in the second place, which compels the Banks to do business by issues of notes, instead of doing it by Bank credits.—The old United States Bank, with a capital of ten millions of dollars, and making annual dividends of eight per cent, never had in circulation at any one time notes to the amount of five millions. More than one half of its business was done by Bank credits---Its business was confined to the commercial cities, where a credit at Bank answered the purposes of merchants as well, and their convenience much better, than Bank notes---If North-Carolina had her commerce concentrated at one or two points, one or more large commercial cities would grow up; markets would be found at home for the productions of the State; foreign merchandize would be imported into the State for the demands of the market; our debts would be contracted at home; and our Banks would be enabled to change their course of business. They could give activity to the commerce of the State, and yet issue but a small amount of paper; and the amount issued would be confined in its circulation almost entirely to the State. To these advantages may be added another of no small moment: The profit upon our commerce would be made in North-Carolina, whereas now, it is made in other States. The annual profit made upon our commerce in other States, and which is totally lost to North-Carolina, is estimated at more than half a million of dollars.

In framing a system of policy which is to extend our commerce and improve our agriculture, it will be necessary to keep in view the necessity of sustaining the credit of our Bank paper. We need not enquire whether it was wise to substitute

Bank paper in the place of the precious metals, for a circulating medium. It is in vain for us to attempt to control the course of business in the commercial world; and whilst every State in the Union, and the General Government itself, have established Banks, in which the specie of the nation is deposited, we ought not to expect that we can adopt any system by which this specie shall be drawn out and form a circulating medium. Events have put this subject beyond our control, and we must legislate upon the state of things as they are, and not as we would wish them to be---Independently of this consideration, it is certainly problematical whether the quantity of the precious metals is equal to the present extended commerce of the world. For the last ten years this quantity has greatly decreased, both in Europe and America. The trade to India, which annually swallows up a large portion of the Silver of Europe and the United States, has extended itself within the last ten years, during all of which the coinage in South-America has been much interrupted, and the supplies to Europe and the United States have been very precarious. To this view of the case may be added, that since the close of the Revolutionary War in 1783, the commerce of the world has probably doubled, and more than twice the quantity of circulating medium is now required for the purposes of commerce that was required at that time---Commercial States seem to have been driven to the necessity of Banking, as an expedient to supply the deficiency of the precious metals--- This expedient has been abused, both in Europe and America; but this abuse furnishes no solid argument against the judicious use of this expedient: and it is not pretended that such abuse has taken place in North-Carolina. Our Legislature have acted with due caution in establishing Banks; and notwithstanding the embarrassments under which those institutions now labour, no doubt can be entertained of the ability and integrity with which their concerns have been managed---The writer of this Memoir has no interest in any of the Banks, except as a citizen of the State; as such, he feels a deep interest in their welfare. The character of the State is in some measure identified with the character of its Bank paper: half a million of the capital of the Banks belongs to the State, and nearly fifty thousand dollars of the public revenue are annually derived from these Institutions---They are essentially necessary to the growth of our commerce, and the extension of our industry; and their situation claims, in a peculiar manner, the calm and sober attention of the Legislature---The circumstances connected with the situation of our Banks, circumstances which the events of the year 1819,

have rendered obvious to every man of common observation, furnish one of the strongest reasons why the Legislature should act promptly and decisively in carrying into effect a system of policy which shall change the course of commercial business in North-Carolina: a system which shall concentrate our commerce within our own territory, establish markets at home for the sale of our productions, and the purchase of foreign merchandize.

We inhabit a State, the soil of which is little inferior to that of any of the Atlantic States; we have as many square miles of territory as the State of New-York; we have a population little short of seven hundred thousand, a population industrious, moral and intelligent; few objections can be urged to our climate; we have fine rivers intersecting our State, affording channels of communication from the ocean, not only to the heart but almost to the extremity of our territory, at sundry points, and offering greater facilities for internal commerce than are enjoyed by any of the neighboring States. With these advantages at command, what can prevent us from becoming a rich, great and powerful member of the Union? Nothing can prevent it, but our supineness and want of public spirit.

In North Carolina, the cultivation of the soil will form the basis of public prosperity. To develope the resources of our soil, it is necessary to give facilities to our commerce. Industry will be inactive whilst there is no demand for its productions. An active commerce is the aliment of labour; and at this day, when Political Economy has attained to the rank of a science, Statesmen will not seek to promote the Agriculture of a country by bounties and premiums, but will turn their attention to those ways and means by which, in the first place, the products of Agriculture can easily find a good market, and by which, in the second place, the profits of that commerce which sustains the market, shall be contributory to the wealth of their own, rather than of other States.

It is proposed, in the following Memoir, to take a view of the internal condition of North-Carolina, her advantages for foreign commerce, for commerce with neighboring States, and for that commerce which is employed in the buying and selling of commodities for home consumption. Each species of commerce contributes to enliven industry, and to augment the wealth of the State, and as such claims the attention of the Legislature---These subjects are treated of in the "*View of the Internal Improvements contemplated by the Legislature*," which has been drawn up by the Board of Commissioners, and submitted to the consideration of the Principal Engineer for the State.

It is further proposed to take a view of what the Legislature has thus far done towards improving our internal condition, to point out, in part, what remains to be done, and shew the ability of the State to do it. This will lead to an enquiry into the resources of the State, and the condition of her finances---Upon these subjects general remarks will be avoided. Facts taken from the public records of the country will be submitted; and men who have not turned their attention to this subject, will be astonished to find how little our resources are understood.

Should this Memoir contribute in the least to cherish a zeal for the honor and prosperity of North-Carolina, it will be gratifying to the writer, whose principal ambition is, to see his native State assume that rank in the Union, to which she is entitled by her physical resources, and the moral worth and intelligence of her people.

What the Legislature have thus far done on the subject of Internal Improvements.

AT the close of the late War with Great Britain the public attention was directed to the subject of Internal Improvements; and it is a little remarkable, that in the winter of 1815, New-York passed the law under which the Great Canal from the Lakes to the North River has been commenced; Virginia established a Fund for Internal Improvements and appointed a Board of Public Works; and North-Carolina, for the first time since her political existence, resolved to appropriate a part of her revenues to the Improvement of her Internal Condition. Pennsylvania had long before set an example of the most honorable kind upon this subject. An appropriation of three hundred thousand dollars and more, for making Roads, erecting Bridges, &c. had become so frequent in that state, that her internal condition became enviable. Her Agriculture, her Commerce, her Manufactures, made a progress that was astonishing; her industry and her wealth extended, and she proved, beyond all doubt, to men who understood the subject, that one thousand dollars laid out in Internal Improvements, add ten thousand to the National Wealth: that liberal appropriations for Roads, Bridges and Canals, do not impoverish, but enrich a State; do not increase the public burthens, but render them more light. For notwithstanding the millions which Pennsylvania has appropriated to these objects, such has been the increase of her wealth, and the productiveness of her revenue, that she has been enabled almost entirely to dispense with ordinary taxation, and to fill her Treasury from the proceeds of her Bank Stock, Stock in the Public Funds, Turnpike and Canal Stock —New-York, rivalling Pennsylvania in her commerce, resolved to follow her example in improving her internal condition. Having by repeated surveys ascertained the practicability of opening a communication by water from Lake Erie to the North River, she levied taxes to raise a fund of five millions to open this communication. Such a resolution was worthy of the statesmen who proposed it and of the State which adopted it; and the work which will be executed in pursuance of it, will have no parallel either in Europe or the United States—Virginia determined at the same time to take ef-

fectual measures to improve her Inland Navigation. She created a fund of one and an half million, and pledged her faith that the proceeds of this fund should be applied to the execution of such Public Works as the Legislature might from time to time be disposed to patronize: She established a Board of Public Works to manage this fund, to employ a Principal Engineer and Surveyors, and to superintend the public works of the State, so far as to have the proper plans drawn up, and to report to the Legislature, from year to year, their progress and condition. Since that time, South-Carolina has appropriated a million of dollars for improving her Internal Condition, and has authorised an expenditure of two hundred and fifty thousand dollars thereof annually: leaving to her Principal Engineer the forming of all the plans, and in a great degree the designation of the objects, the Improvement of her Rivers being the main one. It remains to be seen what North Carolina has done upon this subject.

Early in the Session of the General Assembly in 1815, a resolution was submitted on the subject of the Inland Navigation of the State, which was referred to a joint select Committee of the two Houses. The Committee made a Report, in which they gave a general view of the condition of the State and of her capacities for Commerce; and submitted a plan for improving her Inland Navigation. The outlines of this plan were,

1. That Companies should be incorporated for Improving the Navigation of the Principal Rivers, who should hold their rights and privileges forever—
2. That the rights and privileges of a Company should extend from the sources of a River to its mouth, or to the line of the State, and to all tributary streams—
3. That each Company should be entitled to levy such Toll, as would yield fifteen per cent. upon the Capital expended—
4. That the State should subscribe one third part of the Capital Stock of each Company.
5. That a Board of Commissioners should be appointed to superintend the Public Works on behalf of the State; to employ a Principal and Assistant Engineers; to have surveys made; and to report annually to the General Assembly the state of the Public Works, the money which had been expended, the progress which had been made, &c. And to recommend, from time to time, such further works as they might think should be executed—It was further proposed that this Board should be charged with the duty of collecting Statistical Information of the Agriculture and Commerce of the State: Information relative to the Soil and Climate, &c.

The Committee proposed to give numerous details to this general plan, should the General Assembly sanction the outlines---The subject was novel and it underwent much investigation, particularly in the House of Commons, where the discussion was animated and interesting. The Senate sanctioned the plan, but it was rejected by the Commons. Bills were then drawn up and offered incorporating Companies for the Roanoke and Cape-Fear Rivers, which, after much opposition, and having received sundry amendments, were passed. The State agreed to subscribe twenty-five thousand dollars of the capital stock of the Roanoke Company, and fifteen thousand of the Cape Fear Company.

The Committee recommended a Survey of our Inlets and of the principal Sounds, and Commissioners were appointed to have a Survey made of the Albemarle and Pamplico with instructions to ascertain, if it were practicable to open a direct outlet to the ocean from the Albemarle.—John Haywood, Peter Browne, William Boylan and Joseph Gales were appointed Commissioners to have Surveys made of the Roanoke, Tar, Neuse, Cape-Fear, Yadkin and Catawba Rivers and were instructed to have a Survey made between the Cape-Fear and Yadkin, with a view of ascertaining whether a communication by water could be opened between those Rivers—They were authorised to employ one or more Surveyors, and were directed to report to the next General Assembly.

During the Summer of 1816, a partial Survey was made of the Albemarle and Croathan Sounds and of Roanoke Inlet, by Capt. Clarke, late of the Corps of Engineers. He endeavored to learn the direction and relative influence of the currents along the Coast north of Cape Hatteras, a knowledge of which was indispensably necessary in determining the question of making an Outlet from the Albemarle. It is not understood what circumstances prevented Capt. Clarke from completing his Survey. He drew up a Map of this part of the Coast, in which he marked out the direction of the principal currents which could affect an Outlet; but their relative forces not being determined, the question respecting this Outlet, so far as the same depends upon a correct knowledge of those currents, remains in the same situation in which it was in the year 1816. The Map of Capt. Clarke will, however, be very useful to other Engineers who may be called upon to examine and determine this question.

Peter Browne, Esquire, was appointed Chairman of the Board of Commissioners charged with the Surveys of the prin-

cipal Rivers, and the employment of competent Surveyors being the first thing necessary, the Board opened a correspondence with Gentlemen in the Northern States, and Col. Benjamin F. Baldwin of Massachusetts was recommend to them. Upon an Invitation from the Board, Col. Baldwin came out, and in the Fall of 1816, made Surveys of the Tar and Neuse Rivers. His Reports of these Surveys were submitted to the General Assembly of that year; and the Board were continued, with instructions to employ a Principal Engineer for the State and one or more Surveyors. They were also directed to purchase such Maps and Charts as they might think would be useful, and to have such other and further Surveys made as to them might seem necessary to aid the General Assembly in determining upon plans of Internal Improvement.

The Committee on Inland Navigation, in their report to the General Assembly in 1816, submitted definite views of the Improvements which they deemed necessary. They related

1. To the Improvement of our Inlets.
2. To the opening of our principal Rivers.
3. To the junction of two or more of those Rivers by Canals.
4. To the concentration of our Commerce at a few points, by means of the foregoing Improvements.

They recommended the continuance of the Board for a Survey of the Albemarle, Croathan and Pamplico Sounds, and Roanoke Inlet; and the incorporation of Companies for the Tar, Neuse, Yadkin and Catawba Rivers. Charters were granted for these Rivers, similar to the Charters which in 1815, had been granted for the Roanoke and Cape-Fear.

The General Assembly having directed the employment of a Principal Engineer, the Board offered the appointment to Col. Benjamin F. Baldwin, who declined it; and the rains of the Winter having rendered a further prosecution of Surveys at that time inconvenient, he returned to Massachusetts. The whole of the year 1817 was consumed in fruitless endeavors to procure a Principal Engineer. Mr. Benjamin H. Latrobe, who stood at the head of the Civil Engineers in the United States, and in whose office many promising young men had been educated, early advised the Board to procure an Engineer either from France or England. He had received his education in England, and was well acquainted with the progress which the science of Civil Engineering had made in Europe since the commencement of the French Revolution. The Board offered the appointment to Mr. Latrobe at a salary of three thousand dollars. He declined the appointment, but very politely and generously aided them with his advice upon

all the subjects committed to their charge by the General Assembly.—Mr. Lee, the late Consul of the United States at Bordeaux, having recommended Mr. Pagenaud, the appointment of Topographical Engineer was offered to him. Mr. Pagenaud was a French Gentleman, who emigrated to the United States upon the restoration of the Bourbons. He had been educated in the Polytechnic School at Paris, and during the government of Bonaparte, had been placed at the head of the Topographical Engineers in the Department of the Garonne. Almost at the same time that Mr. Pagenaud agreed to accept the appointment which the Board tendered to him, he received permission to return to France, of which he immediately availed himself.

In the Summer of 1818, Peter Browne, Esquire, the Chairman of the Board, sailed for England; and the Board having spent eighteen months in fruitless efforts to procure a Principal Engineer in the United States, requested Mr. Browne to engage one in England: He was also requested to engage a competent Surveyor and Draftsman, and to purchase for the State in London, a complete set of Mathematical Instruments required for the Engineer's Department. The General Assembly of 1817, in contemplation of Mr. Browne's absence from the State, added Archibald D. Murphey, Esquire, to the Board, and upon the sailing of Mr. Browne, he was appointed Chairman of the Board pro. tem.

The Companies which were incorporated in 1815 and 1816, began to be organised, and were anxious to commence their Work. It became necessary, therefore, to commence the Surveys ordered by the General Assembly. If Mr. Browne should succeed in engaging a Principal Engineer, the Board considered that this Engineer, upon his arrival, should be occupied in planning the Public Works and superintending their execution: that great part of his time must in this way be taken up, and that he could not even plan a public work without the aid of an accurate Survey—For these reasons, the Board availed themselves of the best talents which they could bring into their service, and the Surveys were commenced in July 1818. These Surveys were directed

1. To the Yadkin.
2. To the Cape-Fear.
3. To the Country between the Yadkin and Cape-Fear.
4. ——————————— Roanoke and Pungo.
5. ——————————— Roanoke and Tar.
6. ——————————— Tar and Neuse.

Mr. William Terry made a partial Survey of the Cape-Fear between the Towns of Fayetteville and Haywood, and of the

Yadkin between Skeen's and Stokes's Ferries—He also ascertained the relative levels of the Yadkin at Skeen's Ferry and the Uharee at Lassiter's Ford.

Messrs. John Hix n and Hiram Jennings examined the Yadkin, from Wilkesborough to the South Carolina line, and recommended plans of improving its Navigation, except at the Narrows and Falls.

The Reverend Joseph Caldwell and Mr. Elisha Mitchell of our University, made a Survey of the Narrows and Falls of the Yadkin.

Messrs. Jonathan Price and Woodson Clemons made a partial Survey of the country between the Uharee and Deep Rivers, and ascertained the relative levels of the beds of those Rivers at sundry points—They also made Surveys between the Roanoke and Pungo, the Roanoke and Tar, and the Tar and Neuse Rivers.

Reports of these Surveys, with Maps and Profiles, were submitted to the General Assembly of 1818, and three thousand copies of the Reports were ordered to be printed for distribution among the several Counties.

A short time before the Meeting of the General Assembly in 1818, the Board received a Letter from Peter Browne, Esquire, in which he stated the great demand for Civil Engineers in Europe, the difficulty of procuring them, and the high prices which were paid for their services; that since the termination of the late War upon that Continent, the respective Governments had turned their attention to the Improvement of their Internal Condition, and given employment to all their eminent Civil Engineers; that he found he could not engage a Principal Engineer for North-Carolina upon a salary which the General Assembly would approve of, and requested further instructions—The Board submitted the subject to the General Assembly, with a request that an opinion should be expression as to the salary which the Board should engage to pay—The Communication of the Board was referred to the Committee on Internal Improvements, who reported a resolution that the subject should be left to the discretion of the Board; and this resolution being agreed to by the two Houses notice of it was immediately transmitted to Mr. Browne.

Early in the year 1819, Mr. John Couty, who had been in the service of the Principal Engineer of Virginia, was employed by the Board to prosecute the Surveys which had been commenced in 1818. He was instructed to make the Survey between the Pedee and Cape-Fear for the Lumber River Canal; to make a Survey of the Yadkin at the Narrows and Falls, on

the Eastern side of the River (Messrs. Caldwell and Mitchell having confined their survey chiefly to the Western side): to make a Survey of the Pedee from the Uharee to the South-Carolina line; and to make a Survey of the Country between the Catawba and Pedee, by the way of the Rocky River—The Reports of these Surveys, with Mr. Couty's Maps and Profiles, will be laid before the next General Assembly.

It has been an object with the Board to make these Surveys auxiliary to the compiling of an accurate Map of the State; and they will be found eminently useful in this respect, independently of the main object for which they were ordered by the General Assembly. It is very desirable to have such a Map. Virginia has lately voted fifty thousand dollars for the compilation of an accurate Map of that State, notwithstanding the fine Map which Mr Madison the late President of William and Mary College, published under the patronage of the Legislature, a few years ago. The Map of North-Carolina, by Messrs. Price and Strother, has an accuracy not to have been expected at the time it was compiled. At that time, little was known of the Geography of the Western parts of the State; and there is one-sixth part of the Territory of the State, of which this Map affords a very indifferent representation. It is that part which lies between the Blue Ridge and the Great Ridge of Mountains, along the summit of which runs the line dividing North-Carolina from Tennessee, and in which lie the counties of Ashe, Buncombe, Haywood, part of Burke, and all the Cherokee Country within the limits of this State. Mr. Strother visited this part of the State, and obtained the best information he could from the Inhabitants, as well as by his own observation of the ranges of Mountains and the direction of the water courses: But the population was small and scattered, there were few public highways, and it was impossible for him to obtain information for an accurate Map. Within this section of the State, there are more than five millions of acres; its territory equals in extent that of the Judicial districts of Edenton and Newbern; and some of the finest lands in North-Carolina are found here—The whole is a rich mountainous country.—The writer of this Memoir, although he had sought many opportunities of obtaining information, had but a very imperfect idea of its extent or value, until he visited it in the fall of 1819. It is a portion of the State little known to the people of the Middle, Southern and Eastern Counties: But its extensive territory and growing population, added to the circumstance that there are at least a million of acres belonging to the State within the Cherokee Nation of

Indians, render this country a subject of peculiar consideration with the Legislature.

Upon this subject, it may be proper to remark, that no time should be lost in settling the South-Western Boundary between this State and Tennessee. By the cession Act of 1789, this Boundary is not defined beyond the Great Unica Mountain. From that Mountain to the line of Georgia, the act of 1789, declares the line shall run on the summit of the principal ridge of Mountains. But there are several ridges; and from the late Survey made by the States of Tennessee and Georgia for the purpose of settling the lines between those States, it appears that Tennessee has selected a ridge of Mountains that has heretofore been considered by us as lying within our Territory, and including a large portion of the most valuable lands within the Cherokee Country in North-Carolina—As the Cherokee Title is on the point of being extinguished, it becomes a matter of interesting concern to us to have the conflicting claims of Tennessee and this State speedily settled—When this shall be done, the boundaries of North Carolina will be determined.

In making the Surveys ordered by the General Assembly, it has also been an object with the Board, to render those Surveys subservient to the interests of Science, by collecting information of the Geology and Mineralogy of the State. But thus far they have found it impossible to realize their wishes in this respect. They hope, however, should the General Assembly continue the Board, to be able to collect much useful information on these subjects.

In July, 1819, Mr. Hamilton Fulton arrived from Europe, bringing letters to the Board from Peter Browne, Esquire, in which he stated, that in pursuance of the powers given to him, he had engaged Mr. Fulton as the Principal Engineer for the State, at the salary of £1200 Sterling; and Mr Robert H. Brazier, as Surveyor, at the salary of £300:—That he had found it impossible to engage a man of competent talents at a smaller salary, and that neither of the two Principal Engineers of Great-Britain could be had at a salary of fifty thousand dollars per year—Mr. Fulton had been educated for his Profession by Mr. Rennie, and had been long in the service of Mr. Telford, the two Principal Engineers, not only of Great-Britain, but of Europe; he had been for many years employed in laying out and making Canals, Locks, Bridges, &c.; in Draining Marshes and Fens, making Turnpikes and Rail-Ways.—He had been employed by the Board of Admiralty, at Bermuda and Malta, and had laid out for the King of Sweden the

Great Canal from Gottenburg to the North Sea, to the Baltic. The Board confirmed the contract made by Mr. Browne with Mr. Fulton, and drew up for him the Instructions which are found in the following "*View of the Internal Improvements contemplated by the Legislature of North Carolina.*"

Mr. Fulton stated to the Board, that he must make himself acquainted, in the first place, with the Geography of the State; that such a knowledge was indispensably necessary, before he could plan the Internal Improvements which the Legislature contemplated. He was therefore advised to visit the principal Rivers, and give them a cursory examination, and instruct the several Companies as to the immediate Works in which they were engaged; to traverse the State as extensively as he could, and learn not only its Geography but its Topography at those points where Public Works were contemplated. In pursuance of this advice, Mr. Fulton visited the Neuse, the Tar, the Cape Fear, the Yadkin and the Catawba; and the result of his examination of those Rivers will be laid before the next General Assembly.

HAMILTON FULTON, Esq.

THE Commissioners herewith submit to you, a View of the Internal Improvements contemplated by the Legislature of North-Carolina, with such remarks thereon as they suppose may aid you in your enquiries upon the several subjects committed to your care as Principal Engineer of the State.

With much esteem, I am, Sir,
Your obedient Servant,
A. D. MURPHEY, *Chairman, &c.*

August 10, 1819.

A View of the Internal Improvements contemplated by the Legislature of North-Carolina.

The Internal Improvements contemplated by the Legislature of North-Carolina, relate

1. To the Inlets on our Coast.
2. To the Sounds along the Coast.
3. To the Primary Rivers.
4. To the junction of two or more of those Rivers by navigable Canals.
5. To the Public Highways.
6. To the Draining of the Marshes and Swamps of the Eastern and Southern Counties.

In the application of the Public Revenue to the various objects of Internal Improvement, the Legislature has had due regard to the several sections of the State, and is anxious to give effect to a system which is general, and at the same time definite. One part of the State requires Improvements very different from those required in another. The counties bordering on the Mountains are at a distance from Markets, and have to rely on land-carriage for getting their productions to them. These counties require good turnpike roads.

The middle counties are intersected by fine Rivers, which are now useless for the purpose of Navigation, on account of obstructions which nature has placed in them. Those counties require those obstructions to be removed and the Rivers to be made Navigable. The counties to the South and East, suffer disease and pestilence from their numerous and extensive Swamps and Marshes: their finest lands lie neglected, and labour, instead of being directed to the pursuits of a pro

ductive Agriculture, is turned to the making of Tar and the collecting of Turpentine. All the counties of the State are interested in improving the Inlets upon our Coast, and concentrating at a few points our scattered Commerce. Individual capital is insufficient to effect any of those great objects. They require the resources of the State; and in no way can those resources be so well applied as in making improvements, which shall aid the health and raise the moral condition of our population; which shall give encouragement to industry and facilities to Commerce.

The Inlets on our Coast.

The plans of improvement for the interior of the State, are intimately connected with the Inlets on our Coast. At present, there are only two Inlets from which there is a communication with the Interior—These are at Ocracocke and Cape-Fear. There are two other Inlets, Old Topsail at Beaufort, and Bogue at Swansborough, to which attention is invited, for reasons which will hereafter be explained. The Inlet at Cape-Fear is the best in the State, and is better situate than any other for the general Commerce of the middle and western counties. At the mouth of the Cape-Fear there are two Inlets, one over the main Bar at Smithville, having a depth of seventeen feet water at high tides; the other lately formed, and therefore called the New Inlet, having a depth of thirteen feet water over the Bar. This Inlet is thought to be gradually deepening, and in the course of the next fifty years will probably have eighteen feet of water. It is protected by the promontory and shoals of Cape Hatteras from the North-Eastwardly currents of the Gulf Stream; and the current setting through it has its deposits carried to the South by the eddy current which sets down the coast from Cape Look-out, which current lodges these deposits upon the Northern part of the promontory and shoals of Cape-Fear.

At the main Bar at Smithville, may be seen very distinctly, the operation of those causes which are constantly changing the condition of our Coast—The Gulph Stream, running with a velocity of nearly three miles in an hour, sweeps along to the North-East, distant only about thirty miles from the Bar; and gives motion in that direction to a great mass of waters nearer to the Coast; which mass meeting with the current

from the Cape-Fear, forms an eddy, in which the deposits forming the promontory and shoals of Cape-Fear have been made. These deposits have gradually extended the shoals and prolonged the promontory; and the consequence has been, that the eddy current setting down the coast from this promontory, has gradually increased in strength, and is now fast washing away the sands from the South Western side of the Promontory, and depositing them on Oak Island to the South-West of the Inlet.

This current has, within the recollection of the old Pilots at Smithville, encroached more than half a mile upon Bald Head, and prolonged the head-lands of Oak Island a greater distance. Those Pilots are of opinion, that within a few years, the promontory of Bald Head will be extended to the Frying-Pan Shoals. The currents are continually changing the channels over the Bar; but amidst all those changes, the depth of water continues nearly the same: and unless the strength of the current from the Cape-Fear should be considerably weakened by the widening and deepening of the New Inlet, the same depth of water may continue.

The central situation of the Cape-Fear River, the improvement of which its Navigation is susceptible, the possibility of bringing to it the trade of two-thirds of the State, the superiority of its Inlets to any other on our Coast, render any thing connected with Improvements on this River of peculiar importance—And it may here be proper to notice certain facts intimately connected with the Navigation and Commerce of this River. The Cape-Fear receives, a little above the Town of Wilmington, Black River and the North-East; and a few miles below this Town, stretches out to the width of nearly a mile, and gradually widens until it reaches the Bay at Smithville.

Wilmington is distant thirty miles from Smithville; and the tide which varies at Smithville from four to six feet, varies at Wilmington from eighteen inches to two and an half feet. The first eddy produced by the meeting of the current of the River with that of the tides, is nearly twenty miles below Wilmington; and in this eddy a deposit is made which forms what is called "the Flats." Over these Flats, at high tide there is seven feet water. Vessels drawing more than eleven feet of water, are compelled to lighter at the Flats, and are put to much expense and inconvenience on that account. Wilmington continue to be the principal port of the Cape-Fear, it will become a subject of interesting enquiry, whether this obstruction to the Navigation of that River

can be permanently removed?—If the deposit be made by the meeting of the currents of the River and the tide, will it be possible to prevent it? or will it be possible to vary the place and manner of the deposit, so that a deep channel may be kept open? The Flats extend about three hundred yards up and down the River. The deposit is a light, soft mud, and vessels often plough through it to the depth of two feet.

When the colony first settled upon the Cape-Fear, the scite selected for a shipping port, was at Brunswick, a short distance below the Flats. For sixty years after the settlement of the colony, Lumber and Naval Stores constituted the principal articles of export from the Cape-Fear: The width of the River below Wilmington, exposed it to the influence of the winds, and rendered the descent of rafts of Lumber and Naval Stores dangerous: And this part of the River was considered also dangerous to the Boats which descended the River from the interior of the country—These circumstances induced the government to patronise the growth of a town higher up, where the River was narrow; and the bluff at Wilmington was selected. If this removal of the seat of trade was advisable at the time it was made, the change which has since taken place in the condition of the country, the increased amount of Agricultural products for exportation, and the unhealthiness of Wilmington, certainly render it at least problematical whether it is to be considered beneficial at this day.

Wilmington is situate on the Eastern side of the River, having to the West extensive rice swamps the exhalations from which destroy the health of its inhabitants. The evil might possibly be in a great degree remedied by draining the swamps and changing their culture.

Wilmington has good water, perhaps the best in the Southern Ports. The water in the River is fresh, and vessels can lie at anchor without danger from the worm, which soon destroys them at the mouth of the River, and secure from the danger of tempests. These are decided advantages, and render Wilmington, in the opinion of many, the most eligible port for the Cape-Fear. A contrary opinion is entertained by others, who think that Smithville is the most eligible port, and the one which the government should patronise. The Bay at Smithville is five miles wide, protected on the North by the main land, on the North East by Bald-head, and on the South-West by Oak Island. Smithville is situated on the Bay, open to the sea over the main Bar, and no objection is made to its healthiness. It is the place of resort for the people of Wilmington during the sickly months of Summer and Autumn.

The channel for vessels lies near to the main land, and wharves may be extended to the channel. All vessels which enter through the New Inlet, or over the main Bar, can lie in this channel. The objections to Smithville are, 1st, the width of the River for nearly thirty miles above. 2d, the worm which destroys vessels that lie long at anchor. The introduction of Steam Boats upon the Cape-Fear has removed the first objection, as to all articles for exportation except lumber and naval stores. The second objection may possibly be done away by the construction of Docks to be supplied with fresh water from Elizabeth River. Whether Wilmington or Smithville should be patronized by the government, as the principal port for the Cape-Fear, is a question of great importance to the state, and intimately connected with the plans of Improvement for transferring to the Cape-Fear the trade of the Pedee and Lumber Rivers.

Ocracocke Inlet.

Through Ocracocke Inlet, shipments are made from the Roanoke, the Tar and the Neuse Rivers. It is inconveniently situate for the Roanoke, and a voyage from the head of Albemarle sound to Ocracocke, is thought to be equal to a voyage from Ocracocke to New York or to the West-Indies. The Navigation off the coast at Ocracocke is dangerous; the channel across the Bar is variable and difficult; within the Bar lies the Swash, over which there are only eight feet of water, and within the swash there is no harbour, nor good anchorage-ground. No part of our coast seems to be subject to greater or more frequent changes than that near Ocracocke. The great mass of waters in the Albemarle and Pamptico Sounds, supplied by numerous rivers, pass out to sea, principally, through this Inlet: and some idea of the strength of the current which sets through this Inlet may be formed, from the fact that there are scarcely any perceptible tides in the Sounds. This current meeting the current of the tide, forms an eddy within the Bar, in which a deposit is made which forms the swash. The Inlet has widened very much within the last fifty years, and the depth of water across the Bar has lessened. It is said, that at present this depth does not exceed fourteen feet. Vessels drawing more than eight feet water, have to lighter in crossing the swash; and this circumstance, added to the other of there being no harbor, renders the Navigation through

this Inlet not only inconvenient, but often extremely dangerous. To lessen the inconvenience, it has been proposed to use Camels for taking vessels across the swash; and to lessen the dangers of Navigation, it has been proposed to sink Piers, mooring Anchors and Chains. The peculiar gurgitating quality of the sands at this Inlet, renders it very doubtful whether any erection of piers would prove permanent. Vessels which have been wrecked here, have been quickly swallowed up in the sands, and other vessels now sail over them. If the Inlet continue to widen, the depth of water over the Bar will continue to decrease, and this will be followed by an increase of deposit at the swash. This swash is like the Flats of the Cape-Fear, of nearly the same width, and formed of the same sort of light mud, which changes its position at almost every storm—The Commerce of the Tar, the Neuse, and the Roanoke (except so much of the latter as goes to Norfolk,) is dependent upon the Inlet at Ocracocke; and although so far as the subject is now understood, there seems to be but little ground to hope that this Inlet can be so improved that a safe and commodious Navigation can be had through it, yet if a better Outlet cannot be found for the rich commerce of these Rivers, such improvement should be made at Ocracocke as the situation of the Inlet will admit, and the revenues of the State be able to meet.

The difficulties and dangers attending the Inlet at Ocracocke, have directed the public attention 1st. To the opening of an Inlet at the lower end of Albemarle Sound. 2dly, To the opening of a communication by Navigable Canals from the Roanoke to the Inlet at Beaufort, or at Swansborough: and concentrating at one port the Commerce of the Roanoke, the Tar and the Neuse.

The opening of an Inlet at the lower end of Albemarle Sound.

Whether a suitable Inlet for commercial purposes can be formed at the lower end of Albemarle Sound, is an enquiry which has been deemed of so much importance to the State, that the General Assembly have appointed a Board of Commissioners to conduct it, with powers to employ competent Engineers to determine it. This enquiry derives its importance from the River Roanoke, which is second only to the Hudson in point of extent and the fertility of its lands, in the Atlan-

tic States. Without such an Inlet, apprehensions are entertained that the Commerce of this River will, through the Dismal Swamp Canal, pass to Norfolk. The character, as well as the interest of this State, is deeply concerned in securing this Commerce; and it will be one of the important enquiries submitted to the Principal Engineer, how this can be effected.

Two plans have been proposed; one to open an Inlet at the lower end of Albemarle Sound: the other to divert the trade of the Roanoke to some Inlet now existing upon our coast.—Two questions have of late been agitated in this State: One, whether any of the vessels of Sir Walter Raleigh crossed the Bar: The other, through what Inlet his men entered when they came to Roanoke Island. It is alleged by some, that his vessels anchored off the Coast, and his boats only crossed the Bar; it is alleged by others, that the vessels crossed the Bar and anchored under Roanoke Island. No satisfactory information has been procured upon these points, nor is it probable that any such information can now be had, without access to the Maps and Papers of Dr. Harriott, the Astronomer, who accompanied Sir Walter Raleigh, and made charts of that part of our Coast, and wrote an account of the expedition. It is understood that these Charts and Papers of Doct. Harriott were bequeathed by him to the University of Oxford; and Peter Browne, Esquire, a Member of this Board, now in England, has been requested to procure copies. Whatever doubts may rest upon these points, it seems clear, that at the time of Sir Walter Raleigh's expedition, there were two Inlets on this part of our coast, which have since disappeared. The one was Roanoke Inlet, near to Roanoke Island; the other was Hatteras, anciently called Hatteraske Inlet, situate between Ocracocke and the promontory of Hatteras. It is probable that the closing of the Inlets is to be ascribed, principally, to the widening and deepening of the channels through the marshes west of Roanoke Island—Some of those channels existed at the time of Sir Walter Raleigh, otherwise he would not have given the name of *Island* to what has ever since been called "Roanoke Island." It was ascertained by Mr. Price, during the last Summer, that the bed of the Roanoke at Williamston, was six feet above the bed of Pamptico at Washington: and the strong currents setting through the marshes, shew that the Albemarle is more elevated than the Pamptico Sound. To the East of Roanoke Island, lies Croatan Sound, communicating with the Albemarle to the North and Pamptico to the South. Through this Sound, and through Roanoke Inlet, the waters

of the Albemarle discharged themselves previous to opening of the channels through the marshes—and when we attend to the fact, that the Pamptico is lower by several feet than the Albemarle, it is rendered probable, that most of the waters of the Albemarle passed down Croathan Sound, and that the current through the Inlet must necessarily have been weak, and of course that there was but little depth of water. It is probable that this depth did not exceed eight feet. As the channel through the marshes opened, the currents through the Inlet and Croathan Sound became weaker, until finally the Inlet closed.

The opening of the channels through the marshes has also been the cause, probably, of closing the Inlet at Hatteras. Whilst the waters of the Albemarle were divided between Roanoke Inlet and Croathan Sound, the current setting into Pamptico was weaker than it has been since Roanoke Inlet was closed. This current, meeting the current from the North-East and Pamptico, the combined currents were deflected through Hatteras Inlet. When the strength of the current from the Albemarle was increased by the closing of Roanoke Inlet, it threw the point of deflection further to the South; the consequence of which was, that the combined deflected current no longer passed out at Hatteras Inlet, but made its way through the Banks further to the South; and in this way Ocracocke was opened and Hatteras Inlet closed.

If the closing of Roanoke Inlet has been caused by the opening of the channels through the marshes, it is probable that closing those channels would open the Inlet, and that there would be a greater depth of water in the Inlet than at the time of Sir Walter Raleigh: for it is certain that some of these channels were open in his time. The closing of Croathan Sound would further improve the Inlet, by directing the whole current from the Albemarle directly out to sea. This would probably be the strongest current from the interior to be found on our Coast; and if the Inlet could be prevented from widening, it would have a depth of water equal to that at Cape Fear.

Capt. Clarke, late of the Corps of Engineers, examined these Sounds, under the direction of the Commissioners appointed by the General Assembly. His Map, shewing the direction of the several currents, is filed in the office of Secretary of State.

The objections which have been urged to the forming of this Inlet, are,

1st. The magnitude and expense of the work, compared with the resources of the State.

2d. The difficulty of procuring materials for a permanent barrier across the marshes.

3d. The gurgitating quality of the sands on the Coast. It is said, however, that a clay foundation can be had across the marshes. It is not probable that such a foundation can be had across Croatan Sound—Without it, any barrier which might be erected, would soon be swallowed up in the sands.

4th. The general direction of the winds along this part of the coast.

5th. That such a barrier, if erected, would not have the certain effect of opening the Inlet: that the waters of the Sound might be discharged through Currituck Inlet, or new channels be opened into Pamptico. This objection is certainly weak; for the great press of water in our Sounds is to the South-West; the Albemarle Shoals towards Currituck Inlet; and nothing but prevailing South-West winds could press a strong current in that direction.—As to the supposition that new channels might be formed to the West of the present channels, the width of the land to be broken through, its quality and texture, render such a supposition groundless.

6th. It is said that a current sets down the coast from the Southern Cape of the Chesapeake, and that it is forming a shoal by its deposits near Roanoke Inlet. That such a current sets down the coast, is true; it is one of those eddy currents which are found upon every coast having salient promontories in the neighborhood of the Gulph Stream. But it is not probable that it is forming a shoal near Roanoke Inlet; for this current continues down the Coast to the promontory at Hatteras, and there making its deposits, passes off around that promontory. No reason can be assigned why this current of itself, should form a shoal near Roanoke Inlet. The shoal which has been spoken of, no doubt, was formed in distant years, by the meeting of the current setting down the Coast, with the current through the Inlet, and lies probably to the South of the Inlet.

The Engineer will be able to ascertain many other facts relative to the currents upon the Coast, and correct errors in the statements which have been here made. It is a subject of much interest, and one that requires great attention.

Old Topsail Inlet at Beaufort, and Bogue Inlet at Swansborough.

Forming an Inlet at the lower end of Albemarle Sound, would subserve the purposes of the Roanoke trade only.

The forming of this Inlet would close the passages to it from the Tar and Neuse Rivers, and the commerce of these Rivers must still depend upon Ocracocke, or find a new channel through the Inlet at Beaufort or Swansborough—It it important, in many points of view, to have the Inlet at Beaufort carefully examined: It is believed to the best Inlet upon our Coast North of the Cape-Fear. It is situate close under the lee shore of Cape Look-out, and protected from the influence of the Gulph Stream by the promontory and shoals of Cape-Fear. It has been found subject to fewer changes than any of our Inlets. It has a depth of fourteen feet water over the Bar; and within the Bar, there is an extensive and safe harbor. The town of Beaufort is healthy, and, like Smithville, is the resort of people from the towns in the interior during the sickly months of the year. Two plans have been proposed of concentrating at Beaufort, the trade of the Roanoke, Tar and Neuse Rivers—

1st. By Navigable Canals commencing on the Roanoke at or near the town of Williamston, and extending to the Pamptico at Washington; thence across to the Neuse by the way of Blount's Creek and Swift Creek; thence to the Bay at Beaufort by the way of Clubfoot and Harlowe's Creeks.

2dly. To make a Canal between Clubfoot & Harlowe's Creeks Navigable for Steam Boats; and with these Boats to collect the produce of the Rivers running into the Albemarle and Pamptico Sounds, and concentrate it at Beaufort for shipment. Steam Boats can navigate those Sounds with safety: and can, in the present condition of the Rivers, navigate the Roanoke to Halifax; the Tar to Tarborough, the Neuse to Smithfield, the Chowan and Meherrin to Murfreesborough, and the Pasquotank to Elizabeth. The produce collected at these several towns, and also at Plymouth, Edenton, Washington and Newbern, could, by Steam Boats, be safely and quickly taken to Beaufort for shipment; and merchandise be distributed from that place to those several towns. It is probable too, that by giving to the Canal between Clubfoot and Harlowe's Creeks a suitable width and depth, a considerable portion of this trade might be carried on it in light schooners. This Canal will be only two miles in length, through a level, rich, alluvial soil: and considerable expense in the construction of it might well be incurred, if the benefits which are anticipated should result from it.

To each of these plans, sundry objections are urged.

1. The expense which must be incurred at Beaufort in the construction of Wharves: the channel for shipping lying at a considerable distance from the shore,

2. The length and circuity of a voyage from the Roanoke to Beaufort.
3. The danger of navigating with Steam Boats the wide waters of the Albemarle and Pamptico Sounds.
4. The impossibility of carrying freight in Boats to be towed by Steam Boats in those Sounds.
5. The influence of habit and prejudice; and the difficulty of diverting Commerce from the channels in which it has been accustomed to flow.
6. The jealousy and rivalry of the towns now engaged in shipping through Ocracocke.

As to these objections, it may be observed, that if the Inlet at Beaufort has fourteen feet water over the Bar, this town enjoys, in this respect, an advantage nearly equal to New-Orleans; that it is subject to few, if any, of the objections which apply to Ocracocke, being easy of access from sea, having a fine harbor, and no swash to obstruct the entrance of vessels; being accessible at little expence to all the trade of the Albemarle and Pamptico Sounds, and also healthy. If it be a primary object with North-Carolina to ship her own productions and supply her citizens with markets at home for foreign merchandize, this Inlet, or some other North of the Cape-Fear possessing equal or superior advantages, should be selected, and the liberal patronage of the government should be extended to it. Beaufort would become, to the several rivers of the Albemarle and Pamptico Sounds, what Norfolk is to James River; and would give life and animation to business in the several towns in the interior, which now receive a precarious support from the Commerce carried on through Ocracocke.—Wharves would be constructed as prospects opened to Commercial enterprise. Steam Boats would be found to shorten the distance from the Roanoke; and after navigating the Delaware and Chesapeake Bays with safety, and transporting the productions of the Ohio and Missouri to New-Orleans, they would be found to navigate the Albemarle and Pamptico without danger, and to transport the productions of the country over those waters without inconvenience. Prejudice and jealousy could make but ineffectual struggles, and Commerce would take the channel which the prospect of profit pointed out.

If the plan of making navigable Canals from the Roanoke to the Tar, and thence to the Neuse, be deemed most advisable for uniting the trade of those Rivers, it may easily be perceived that this line of Inland Communication can be directed from the Neuse, either to Beaufort or Swansborough. Little is known of the Inlet at Swansborough; but it is said to have gradually deepened for the last thirty years, and to be little

inferior to the Inlet at Beaufort, either in safety of access from sea, depth of water over the Bar, or in the excellence of its harbor. From Newbern, the distance is nearly the same to Swansborough and to Beaufort. A short Canal between the Trent and White Oak Rivers, would open a communication by water from the Neuse to the Harbor at Swansborough.—Whether this, or the port at Beaufort, shall be selected for shipping the productions of the principal Rivers east of the Cape-Fear; or whether Ocracocke should be continued and improved for this purpose, are questions submitted to the consideration of the Principal Engineer.

Sounds on the Coast.

The Legislature have directed a Survey to be made of the Sounds which stretch along our Coast, from the North Eastern to the South-Western extremity of the State. The object of this Survey is to ascertain how far it is practicable to open along these Sounds, an Inland Communication, which may be of eminent service in time of War; and of convenience in time of Peace. The Dismal Swamp Canal now forms a communication between the Chesapeake and Albemarle, and the opening of the Sounds on our Coast would extend this communication to Little River, on the line of South Carolina—There is a succession of these Sounds, from the northern part of Currituck to the neighborhood of the Cape Fear; but between Bogue Inlet and Cape-Fear, the channel is both crooked and shoal, and this probably is the case in many places between Bogue Inlet and Ocracocke. A cut of a few miles is required to unite these Sounds with the Cape-Fear—South of the Cape Fear, a cut of less than two miles will unite Elizabeth River, which runs into the Bay at Smithville, with Lockwood's Folly Bay, and from that Bay to Little River, there is a continued Sound. The advantages of such an Inland communication by water, in time of War, are obvious: in time of Peace, the advantages would be great, if the Sounds admit of Steam Boat navigation. For they would form a safe and easy channel of intercourse between our sea port towns and those of Virginia and Maryland. At present, we know but litle of our smaller Sounds.

It is understood, however, that their navigation is difficult even for small boats. On these small Sounds, considerable establishments have been made for the manufacture of Salt,

and it will be politic, at least so far to improve the navigation of these Sounds and to connect them with the Bays on the Coast, that the salt could be boated to the Commercial towns.

The Primary Rivers.

The first Improvements which claimed the attention of the Legislature, were those which were required for rendering navigable our primary Rivers. Of these, the Roanoke, the Tar, the Neuse, the Cape Fear, the Yadkin, the Catawba, and the Broad Rivers, are those which will first claim the attention of the Principal Engineer.

In examining the Geological structure of North-Carolina, it will be seen, that a ridge of Granite extends through the State from North-East to South-West, nearly parallel with the Coast and forming in the slope of its Southern margin, the line which separates the primitive and secondary formations from the alluvial. This ridge is connected with several smaller ridges, which although not uniformly parallel, yet have the same general direction with the main ridge. These ridges vary in height, and in the rock of which they are composed; sometimes exhibiting immense masses of Granite, then of Calcarious Rock, then of Slate, &c.

In these ridges, near the Yadkin River, are found the Gold Mines of North-Carolina, and other valuable Minerals are supposed to abound in them. In distant ages, these ridges formed a barrier to the waters of the Yadkin and Catawba, and spread them over great part of the counties of Rowan, Iredell, Mecklenburg and Cabarrus. In the course of time, these waters have found their way to the ocean, along the channels of the Yadkin and Catawba, having gradually worn these channels through the ridges of Granite, from their summit nearly to their base. This ridge of Granite can be traced to the North-East as far as New-York, where it stretches out to sea. It is one of those peculiarities which distinguish the Geological structure of this Continent from that of Europe. This, with other ridges of primitive formations, run nearly parallel with the ocean and with the main ridge of the Continent, the Great Alleghany. The valleys of our great Rivers are at right angles to these ridges. In Europe, and particularly in the Pyrennees, the Alps, and the Appenines, these inferior ridges are lateral to the main ridge; and the valleys of the great Rivers are parallel with, and between these inferior ridges.—Those Rivers have no Falls, like the Rivers here, which cross

the ridges of primitive formations. Mr. Benjamin H. Latrobe, who has directed his attention much to this subject, as well as to other branches of science, is of opinion that the height of this ridge of Granite, which extends from New York through this State to Georgia, is nearly uniform, until it reaches the Roanoke. He found that in the Rivers which cross it, there was a descent varying from 125 to 128 feet, from the water above the ridge to tide-water below it. This probably is nearly the descent in the Roanoke between those two points. But to the South-East of the Roanoke, the ridge is of unequal height and width. It may be traced on the Roanoke, at the Falls above Halifax; on the Tar River, at the Falls below Lewisburg; on the Neuse, at Lockhart's Falls; on the Cape-Fear, at Buckhorn and also at Smillie's Falls; on the Yadkin, at the Narrows; on the Catawba, at Rocky Mount, in South-Carolina, &c. This ridge, which has a width of about seven miles on the Roanoke, seems to be narrower on the Tar and Neuse; it widens as it approaches the Cape-Fear, and, dividing into numerous ridges, has a width of nearly thirty miles on the Yadkin, extending from Flat Swamp to the distance of several miles below the mouth of Uharee river—This ridge gives to the Yadkin a fall of nearly three hundred and fifty feet, and to the Roanoke and the Cape-Fear a fall of about eighty feet, and is scarcely noticed in the Neuse.

Above this ridge, each of the rivers has several small falls, which, with shoals and ledges of rock, constitute the obstructions to their navigation. Below this ridge, each of the Rivers enter the alluvial lands, and their navigation is there obstructed by logs and sand bars.

The Principal Engineer will Survey these Rivers, and determine upon the best methods of improving the navigation of each; whether the beds of the Rivers shall be improved by sluices, or by dams and locks, or by both; or whether Canals shall be made; and if so, at what places Also how far up each of those rivers, and their main branches and tributary streams, the navigation for light boats may be extended.

He will also determine of what materials it is adviseable, in the present condition of the State, to construct locks, whether of stone, of brick, or of timber.

The Tar, the Neuse, and the Cape-Fear, are not, properly speaking, primary Rivers; but they have been classed with the Roanoke, Yadkin, Catawba and Broad Rivers, because they rise above and cross the ridges of Granite; and to distinguish them from those Rivers which rise out of, or below this ridge, and water only the alluvial country.

The Legislature has granted charters to Companies for improving the navigation of each of the primary Rivers, and has subscribed a portion of the capital stock in all the Companies, except that for the Broad River. These Rivers generally intersect the State from North to South, and afford greater facilities of Inland Navigation than are found in any of the Atlantic States. The Roanoke is the most important River in the State, not only on account of the fertility, but also of the extent of the lands which it waters, and the channel which it affords of bringing to our markets the agricultural products of several counties of Virginia. The Dan River, one of its principal branches, runs near to the Virginia line from its source to its junction with the Staunton; and is navigable for light boats to the neighborhood of the Saura Town Mountains.—The Staunton, the other principal branch of the Roanoke, lies altogether in the State of Virginia, and can be made navigable for light boats to the foot of the Blue Ridge. The Roanoke, and its tributary streams, water fifteen millions of acres; of which, nine millions are suitable to the culture of Tobacco, Wheat, Indian Corn, &c. and the residue abounds with materials for lumber and naval stores. The products of this river annually for exportation, may be estimated at two and an half millions of dollars—If proper encouragement were given to industry, by rendering the River navigable, these products would soon exceed five millions.

The company which has been incorporated for improving the navigation of the Roanoke, has received its charter from the Legislatures of North-Carolina and Virginia; and each State feeling a deep interest in the success of this Company, has resolved to aid its efforts. The capital stock of the Company is fixed at three hundred thousand dollars, of which sum, Virginia, in the spirit of liberality which distinguishes all her public acts, has subscribed eighty thousand, and North Carolina twenty-five thousand, reserving to herself the right of enlarging this subscription to eighty thousand. Virginia hopes to direct the trade of this fine River to Norfolk; and will certainly succeed, if great exertions be not made by North-Carolina to secure it—The trade of this River, is a prize worthy of the high ambition of two powerful States—The chances are certainly in favor of North-Carolina; it remains to be seen whether efforts will be made to improve them.

The Tar River rises near to the Virginia line, and running nearly South, discharges itself into Pamptico Sound. Near its mouth, it receives part of the waters of the great swamp in Beaufort County, where it widens and takes the name of

Pamptico River—It is navigable for Steam Boats as high as Tarborough, and its navigation may be improved for light boats to Lewisburg, and probably thirty miles further.

A Survey of this River was made by Col. Benjamin F. Baldwin, in the year 1816, and his Report of this Survey is in the hands of the Principal Engineer; and will give a general idea of the obstructions which exist to the navigation of the River as high up as Lewisburg, where the Survey terminated. The difficulties to be encountered upon this River are very inconsiderable, and it is strange that a spirit of enterprise has not long since overcome them.

The name of the River indicates the character of its principal exports. The Tobacco and Wheat which have been raised on the upper branches of this River in Franklin, Granville, Warren and Halifax, have been waggoned to the markets in Virginia; and the exports of Washington, furnish but a poor idea of the fertility of the Lands watered by this River, or of the wealth of their inhabitants.

Washington is a Port of Entry, and is more conveniently situate for carrying on a Commerce through Ocracocke, than any of the Towns on the Albemarle or Pamptico. It is subject, however, to one inconvenience.—A few miles below the Town, a shoal stretches across the River, over which, as the wind shifts its point, the water varies from nine to eleven feet In this are imbedded numerous logs, which have floated down the River, and within the Harbour, vessels are sometimes endangered by Cypress Stumps, which shew that the Channel here is of recent formation. These stumps can be removed, and a channel opened through the shoal;—but, it is at this time problematical, whether this channel can be kept open. This shoal is probably formed in the eddy made by the meeting of the current of the River with the great mass of waters in the Pamptico Sound: And if this be the fact, the deposit of the River will continue to be made at this point, and a channel across the shoal cannot be kept open, without a continual removal of this deposit—For the purpose of raising a permanent fund, to be laid out in clearing this shoal, the Legislature, by the assent of the Congress of the United States, have imposed a small tonnage duty upon vessels exceeding a certain tonnage, and empowered the Collector of the Port to collect this duty, and appropriate it, under the direction of the Commissioners of Navigation for the Port.—The improvement of this shoal, and also of the Harbour at Washington, will claim the attention of the principal Engineer.

The Neuse River also has its sources near to the Virginia line, and running South, discharges itself into Pamptico Sound below Newbern. Its three main upper branches, Eno, Little River and Flat River, unite in the South-Eastern part of Orange County, where the River takes the name of Neuse. From this place, along the meanders of the River to its mouth, is a distance of three hundred miles. When it enters the alluvial country below Smithfield, it becomes more crooked than any of our Rivers—with little labour it can be made navigable for Steam-Boats as high as Smithfield, and probably higher. Its navigation for light Boats, may be extended to the junction of its main branches, and probably up Eno, by Dams and Locks, to the Town of Hillsborough.—There is no River of the same extent in North-Carolina so easy of improvement as the Neuse. Below Smithfield, this River has been used for transporting Lumber and Naval Stores to Newbern: but the Cotton, Tobacco and Wheat, grown on this River and its branches, above Smithfield, have been waggoned to the markets of Virginia. The want of these staples at Newbern, has prevented the location of commercial capital at that place; and as the Planters and Farmers were dependant upon land carriage, they sought markets where capital was to be found. This has been the lamentable condition of our trade, not only on the Neuse, but on most of our other Rivers.

Newbern is the Port of the Neuse, from which are shipped Lumber, Naval Stores, and large quantities of Indian Corn. The River Trent, which runs into the Neuse at Newbern, has some of the best lands for Indian Corn in the State.

A considerable quantity of Wheat is also grown upon the Trent, and shipped from Newbern. This Town, once the residence of the Colonial Governors, and long the seat of Government, both before and since the Revolution, has gone much to decay. The late Navigation act passed by Congress, has contributed more than any other cause, to produce this decay. The plans of improvement for the Rivers of the Albemarle and Pamptico Sounds, and the Inlets on our Coast, it is hoped, will revive its fortunes, by giving to it a new and an extensive commerce.

The Cape-Fear, like the Tar and Neuse, rises near to the Virginia line. Its main branches, the Haw and Deep Rivers, rise near to each other; and after taking long and circuitous courses, unite at the Town of Haywood, where the River takes the name of Cape-Fear. Its course is then generally South to the Bay at Smithville. This river is navigable for

Steam-Boats to Fayetteville, and may be probably rendered navigable for small Steam-Boats to Haywood. The Haw and Deep Rivers have their Navigation obstructed by rocks, shoals and falls; but these difficulties may probably be overcome, and a navigation be opened up Haw River to the County of Rockingham, and up Deep River to the County of Guilford. Much labor and great expence will certainly be required to make these streams navigable, and such a work must necessarily progress slowly. New-Hope Creek, which runs into Haw River two miles above Haywood, is easily improved. It is a crooked stream, with little fall, and sufficient water for light Boats, to Patterson's Mill, distant only nine mils from Hillsborough. The superiority of its Inlets, and the excellence of its navigation to Fayetteville, have long made Cape-Fear the principal channel of Commerce in this State. The exports from Wilmington have generally doubled, and often trebled, the exports from all our other ports. This River claims peculiar consideration, not so much on account of the fertility of its Lands, as of the facilities which exist of bringing to it for shipment the productions of nearly one-half of the Agricultural part of the State. This River derives importance also from its numerous tributary streams, most of which are navigable almost to their sources. The North East, the Black River, the Rock Fish, and the Little Rivers, are streams which water an extensive tract of alluvial country, abounding in inexhaustible supplies of naval stores and lumber.

The Yadkin rises in the great ridge of Mountains dividing the Eastern and Western waters of the Atlantic; runs East through the Counties of Wilkes and Surry; thence turning to the South, its general course continues the same until it enters South-Carolina—It traverses an uniformly fertile country from the foot of the Blue Ridge. It waters nearly six millions of acres, on which reside one-third of the white population of the State—At its junction with the Uharee River, in Montgomery County, it takes the name of Pedee, which it bears to the Ocean. From the South-Carolina line to the mouth of Uharee, a distance along the River of sixty miles, there are no very serious obstacles to its navigation. Between Uharee and Flat Swamp, a distance of twenty miles and upwards, cross the numerous ridges of Granite which form the Narrows and Falls of this River. From Flat Swamp to Wilkesborough, near the foot of the Mountains, the navigation may easily be made good for Boats of ten

tons burthen. During the last summer, the Rev. Joseph Caldwell, President of our University, and Mr. Elisha Mitchell, Professor of Mathematics in that Institution, made a survey of the Narrows and Falls, with a view of ascertaining the fall of the River, and whether it be practicable to construct a Canal along this part of it. Their survey was chiefly confined to the Western side. During the present year, Mr. John Couty has surveyed the grounds on the Eastern side of the River, with the same view. Their Reports, with their Maps and Profiles, are in the hands of the Principal Engineer; and it is submitted to him, to determine what is the best Plan of Improvement to be adopted for passing the Narrows and Falls: whether by Canals, a Turnpike Road, or a Rail-Way—The Cotton, Tobacco, Wheat, and other articles annually raised for exportation on the Pedee and its Branches, in this State, are estimated at two millions of dollars. If this River were rendered navigable to Wilkesborough, that Town would draw a considerable trade from the neighboring Counties of Virginia, and probably from some of the Counties of East-Tennessee. It is a much more convenient market than any of those Counties can find elsewhere. The construction of a Turnpike Road from this town across the mountains towards Abingdon, would insure a profitable trade from that quarter—As this River runs into South-Carolina, it becomes a question of deep interest to the commercial character of this State, how its trade can be diverted to the Cape-Fear—This question will be considered when the junction of this River with the Cape-Fear is treated of.

The Catawba rises near to the Yadkin; and after watering a very rich country, enters South Carolina. This River has no great obstructions to its navigation in this State. It may be improved for light Boats some distance above Morganton. The great obstructions in this River, are at Rocky Mount, in South-Carolina.—The appropriation of a million of Dollars for Internal Improvements, made by the Legislature of South-Carolina, at their last Session, insures the improvement of the Catawba: and the Farmers on that River will soon have a water carriage for their produce. The navigation of this River derives additional importance, from the consideration that it approaches so near to East-Tennessee. The trade from that section of country can easily be brought to it. It is understood, that a good Turnpike Road can be made from the Pleasant Gardens, above Morganton, by the Yellow Mountain, on to the Tennessee line, and another by the

Swannanoah Gap, through Buncombe. Such roads would ensure to the Catawba a large portion of the trade of East-Tennessee.

The streams which form Broad River, unite in the South of Rutherford County, and thence pass into South Carolina.—This River, and its main branches, may be rendered navigable for light boats, so as to afford a water carriage to more than one half of the extensive County of Rutherford.—This River is the nearest navigable stream to the people of Haywood, and to a great part of the people of Buncombe. The Engineer of South-Carolina is now engaged in improving the navigation of the Broad River in that State; and in a little time, the markets of Columbia and Charleston will be rendered accessible to a rich and populous section of this State.

The first object of the Legislature in the system of Internal Improvements, is to render our Rivers navigable, that the Farmers may have a water carriage for their produce—and to this object the attention of the Principal Engineer will be first directed.

The junction of two or more of the Primary Rivers by navigable Canals.

This Improvement has for its objects

1. The opening of new channels of Intercourse.
2. The shortening of distances to market.
3. The concentration at a few points of the produce of our Agriculture, of our Forests, and of our Rivers; the growth at those points, of commercial towns; and the shipping from those towns the various articles of exports.

Heretofore the productions of the Northern parts of the State, lying on the Roanoke and its branches, and also on the upper parts of the Tar and Neuse, have been sent to the markets of Virginia; and the trade of Broad River, the Catawba and Pedee, has gone to South-Carolina. Thus it has happened, that we have shipped from our own Ports not more than one-third of our Agricultural products; and even a considerable portion of our Staves, Lumber and Naval Stores, have been sent to other ports by the Dismal Swamp Canal, on one side; or by the Wackamaw, Little Pedee and Lumber River, on the other. This unfortunate division of our trade produces many bad effects.

1. It makes us appear a poor state in the union.

2. It leaves us without markets at home : and thus we lose the profits upon our Commerce. The annual loss of Commercial Profit sustained by North-Carolina by not having markets of her own, is estimated at more than half a million of dollars.
3. Our trade being scattered and most of it sent to the neighboring states, we have no large Commercial City : and our whole population is devoid of that animating pride, which a large City and an extensive concentrated Commerce contribute to inspire.

We have a population little short of seven hundred thousand. We have as many square miles of Territory as the State of New-York. We have a soil equal to that of most of the Atlantic States ; and yet, the total amount of exports from our own Ports falls short of three millions of dollars. It is probable. the entire produce of the State, annually for exportation, exceeds seven millions—The products of our labor go to swell the exports of Virginia and South-Carolina, and give to those States a commercial consequence at our expence—To remedy these evils, the Legislature contemplate a system of Internal Improvements, which have for their object, the shipment from our own ports of our own products.

One part of the system is to improve the navigation of our principal Rivers, and thus give to our Farmers a water carriage for their produce. Another part is to concentrate the trade of the State at a few points by navigable canals between the principal Rivers. For this purpose, it is proposed,

1. To unite by navigable Canals the Roanoke, Tar and Neuse Rivers, and to concentrate at some one point their productions for shipment, through Ocracocke, Beaufort or Swansborough.
2. To unite by navigable Canals the Cape Fear, Pedee and Catawba, and to concentrate the productions of those Rivers upon the Cape-Fear for shipment.

The first part of this plan has already been treated upon in part. With a view of ascertaining its practicability, Surveys were made during the last summer by Messrs. Jonathan Price and Woodson Clemons. They were instructed to make these Surveys as low down the Roanoke, Tar & Neuse Rivers, as was thought expedient to attempt a junction ; and commencing at Williamston, on the Roanoke, they took the levels to Washington, on Tar River ; and from the mouth of Blount's Creek, below Washington, to the top of the ridge dividing the waters of the Tar from those of the Neuse. Their instructions relative to these Surveys, their Reports to the Commissioners, and the Maps and Profiles are in the hands of the

Principal Engineer. It will be seen, from their Reports, that their Surveys promise a favorable result : that at a reasonable expence, a navigable canal can be made from the Roanoke, near Williamston, to the Tar River at Washington ; and that a like canal can be made, from the boatable waters of Blount's Creek to those of Swift Creek, above Newbern. It is proposed to extend this line of communication to the Inlet at Beaufort, by making a navigable canal between the deep waters of Clubfoot and Harlowe's Creeks. The late Dr. M'Clure, some years ago, made a small canal connecting the waters of these Creeks. The Legislature has since incorporated a company to widen and deepen this Canal : and it is expected, that by this route, a navigation for Boats drawing six feet water, may be opened from the Neuse to Beaufort, at a small expence—The objections to this route, as the one along which the trade of the Roanoke, Tar and Neuse Rivers should pass, are

1. That below Newbern, the Neuse suddenly widens, and at Harlowe's Creek has a width of several miles ; that Boats navigating the Neuse above, cannot navigate it in safety below Newbern.
2. That in Clubfoot and Harlowe's Creeks, and through the Canal which shall connect them, there will not be depth of water for vessels entering at Beaufort to pass up to Newbern.

These objections will cease to have any weight, should it be found practicable to construct the canal in such a way that it may be navigated by Steam-Boats. And as it may be desirable to run light Steam Boats along the whole line of Canals from the Roanoke, the attention of the Principal Engineer will be directed to this subject, and he will determine whether Steam Boats, upon any construction heretofore known, can be used upon canals without great injury to their Banks. The proposed junction of the Roanoke, Tar and Neuse Rivers, is through alluvial land, and the waters for feeding the canals lie in the great Swamps situate on the summit of the ridges dividing the waters of these Rivers.

The junction of the Cape-Fear, Pedee and Catawba.

The Geological structure of North-Carolina, seems to render it very doubtful, whether any two of our primary Rivers

can be connected at any reasonable expence, to the North of the Granite Ridge, which has been mentioned. Upon this subject, the Commissioners received during the last year an interesting Communication from B. H. Latrobe, Esq. in which he observes, "that all our great Rivers may be considered as "running in deep vallies, separated by ridges more or less "elevated. Their collateral waters are again separated by "lesser ridges; so that the general surface of the high alluvial "land, being considered as having been originally level, the "water courses have worn down the vallies and left the "ridges standing all nearly of the level of the original plains.

"Across these secondary ridges, run from North-East to "South-West, in nearly parallel lines, *original* or *primitive* "rocky formations, creating another range of ridges, almost at "right angles with the first, and which rise above the level "of the alluvial plains that fill the space between them. Now "in this formation, consist all the difficulties which oppose "the union, by artificial means, of one of our great Rivers "with its neighbor. For the first mentioned ridges oppose "the connection through the same valley from North-East "to South-West; and the second, offer a rocky barrier to "their approach by a descent from the higher to the lower "level. And herein, our country differs entirely from Eu-"rope, where the rivers generally run in vallies determined "by the range of primitive or secondary mountains; while, "with us, the Rivers run across our mountain ranges, wear-"ing down deep beds in the vallies between; which thus, "relatively to the Beds of the Rivers, become high obstruc-"tions between them." Mr. Latrobe having aided the Commissioners with his advice as to the manner in which Surveys North of the Granite Ridge and across it, should be conducted, two Surveys were commenced during the last summer, between Deep River, the Southern branch of the Cape-Fear and the Yadkin. The main object of these Surveys was, to ascertain the relative levels of the beds of the Yadkin, The Uharee and Deep Rivers, on the same parallel of latitude, and the height of the intervening ridges. Mr. William Terry took the levels from the Flat Swamp on the Yadkin, to Lassiter's Ford on Uharee; and Messrs. Price and Clemons, commencing on Deep River, at Mendenhall's Mills, made a Survey to Lassiter's Ford, on the Uharee, and to the mouth of Fork Creek, on Deep River; and determined the relative levels of the water at these several places, and also of the several dividing ridges. The Reports, Maps and Profiles of these Surveys, are in the hands of the Principal Engineer.

These Surveys shew, in a very clear manner, the great difficulties which are to be found in the Geological structure of the State to the forming of an union between two of our Rivers to the North of the Ridges of Granite. Yet so desirable, in a few instances, is such an union, that further Surveys will be made to determine its practicability.

Early in the present year, Mr. John Couty was employed to make Surveys between the Pedee and Cape-Fear, South of the Ridges of Granite, and between the Pedee and Catawba, North of those Ridges.—Between Pedee and Cape-Fear, is Lumber River, called on the Map Drowning Creek.

This River rises in the great Ridge of Granite, and runs on a Plain elevated more than an hundred and fifty feet above the beds of the Pedee and Cape-Fear. The ridges which divide its waters from those of Pedee, on one side, and Cape-Fear on the other, run nearly parallel with the River, and after a long slope, gradually disappear. Mr. Couty was instructed to ascertain, in the first place, the relative levels of the beds of these three Rivers, as the basis of his further operations, and then to ascertain

1. Whether a communication by water could be opened from the Lumber River to Pedee.
2. Whether such a communication could be opened from the Lumber River to the Cape-Fear.

Between Lumber River and Pedee, he was instructed to make three Surveys—

1. By the way of Mountain Creek, which runs into the Pedee at Coleman's Mill-pond, near the head of the Grassy Islands.
2. By the way of Hitchcock Creek, which runs into the Pedee several miles below the Grassy Islands.
3. By the way of Marks's Creek, which runs into the Pedee a few hundred yards below the Southern Boundary of the State.

Between Lumber River and Cape-Fear, he was instructed to make sundry Surveys—

1. By the way of Rockfish and thence to Fayetteville.
2. From Rhodes's Mill-pond on Saddle Tree, near Lumberton, to Sullivan's Mill-pond on the Great Swamp, and thence to the Cape-Fear.
3. From Lumber River, below Lumberton, to the Western Prong of the White Marsh, by the way of Peters's Swamp, and across the Great Swamp; down the White Marsh to the Wackamaw River; thence along the Southern margin of the Green Swamp, to Lockwood's Folly River, down that River to the Bay, thence across to Elizabeth River at Smithville.

It will be seen by looking to the Map of the State, that these several routes being surveyed, it will be easy to determine which of them shall be selected. It is not, perhaps, a matter of much consequence whether more than one channel of communication be opened between Lumber River and Pedee; one should be chosen which shall be found least expensive, and most easily made. But the public interest seems to require, that two or more communications by water should be opened between Lumber River and the Cape-Fear. The most important is the one which shall direct to Fayetteville the trade of the Pedee. But lower down, through Robeson, where a Canal can probably be made, connecting the Rivers, at a small expence, the riches of the soil cannot be brought into activity without such an improvement. And, indeed, the great quantity of fine timber for staves and lumber, and the immense forests of pine for tar and turpentine, which every where spread over the country watered by Lumber River, require that some channel should be opened, along which these articles can be taken to the Cape-Fear for shipment. And the rich lands of the White Marsh and Green Swamp, as well as their inexhaustible supplies of materials for Lumber and Naval Stores, also require that a communication should be opened from thence to the Cape-Fear.

Mr. Couty having ascertained that the bed of the Lumber River was sufficiently elevated to feed a Canal on one side to the Pedee, and on the other to Cape-Fear, surveyed the ridge which divides the waters of Lumber River from those of Pedee, and found its lowest point of depression to be at the Poplar Springs; and then ascertained that a Canal taken across at this point, could be directed either into Mountain Creek or Hitchcock Creek. Mr. Couty found little difficulty in tracing out the route for a communication between the Lumber River near the Poplar Springs, and the Cape Fear at Fayetteville.—The Lumber River and Rockfish creek, will form the channel of communication between the Pedee and Fayetteville, for more than half of the distance. Mr. Couty's Maps and Profiles of the several Surveys committed to his charge, and also his Reports, will be placed in the hands of the Principal Engineer.

None of the Internal Improvements contemplated by the Legislature, is of more importance to the interest and character of the State, than the junction of Pedee with the Cape-Fear. The markets on the Cape-Fear are more convenient to the whole country watered by the Pedee and its branches, than the markets of South-Carolina: and the distance from Sneedsbo-

rough, on Pedee, on the South Carolina line, to Wilmington, even by the way of Fayetteville, along the proposed route to that town, is shorter than the distance from Sneedsborough to Georgetown, along the Pedee: and as the depth of water over the Bar at Georgetown, forbids the expectation that a large commercial town can ever grow up at that place, the planters and farmers on the Pedee and its branches, will have their interest much advanced by opening to them the markets on the Cape Fear.

A competition will grow up between these markets and those of South-Carolina,—and produce will be sent where the best price shall be given for it. The character of the State is also deeply concerned in bringing to the Cape-Fear the Commerce of the Pedee: a Commerce nearly equal to one-third of the entire Commerce of the State, and supported by the richest staples which our soil produces.

The Legislature, in the year 1816, incorporated a Company to open a communication by water between those Rivers, and directed the Treasurer to subscribe, on behalf of the State, twenty thousand dollars of the capital stock of the Company. This Company is called "The Lumber River Canal Company." The route of this communication is not fixed by the Charter; and it will be the business of the Principal Engineer to mark out the route.

The General Assembly have directed a Survey to be made between the Pedee and Catawba, for the purpose of ascertaining whether a communication can be opened between those Rivers, and the trade of the Catawba be also brought to the Cape-Fear. As Rocky River seemed to present the most favorable channel for this communication, Mr. Couty was instructed to make a Survey of this River and ascertain the height of the ridge dividing it from the waters of the Catawba. It appears, from his Report, that a communication between the Pedee and Catawba, along the route of Rocky River, is impracticable. A route from the Catawba to some one of the deep Creeks which run into the Yadkin above Salisbury, has been proposed; and it would be well to have a Survey made of this, or any other route, which seems to promise a favorable result: For we are destined to lose all the trade of the Catawba, unless we can connect it with the Cape Fear.

During the present Summer, the Rev'd Joseph Caldwell, President of our University, was engaged to make a short Survey between New-Hope Creek and Eno River, for the purpose of ascertaining whether these two streams could be unit-

ed by a navigable Canal, and a communication by water be thus opened between the Town of Hillsborough and the Cape-Fear. His Report of this Survey will be placed in the hands of the Principal Engineer.

Public Highways.

The General Assembly has not given to the Commissioners any specific instructions upon the subject of the Public Highways; and they, therefore, do not feel themselves at liberty to do more than to call the attention of the Principal Engineer to this subject generally, as one intimately connected with the Internal Improvements of the State. Turnpike Roads across the Mountains from the head boatable waters of the Yadkin and Catawba, seem to be essential parts of this Improvement. So also will be a Turnpike Road from the Catawba to the Pedee, should it be found impracticable to unite the waters of those Rivers. The Principal Engineer will examine the face of the country; its soil, its facilities for Turnpikes and Rail Ways, and, in due time, the General Assembly will give instructions on these subjects.

Draining of the Swamps and Marshes in the Southern and Eastern parts of the State.

The same remarks which have been made on the Public Highways are applicable to the draining of the Swamps and Marshes. No instructions have been given to the Commissioners on the subject; but it is so intimately connected with the Internal Improvements of the State, that the attention of the Principal Engineer is particularly invited to it. There is no doubt that the unhealthiness of the Southern and Eastern Counties is to be ascribed, in a great degree, to the noxious exhalations from their Swamps and Marshes. The revenues of the State cannot be applied to a more worthy object than that of improving the health of its inhabitants, and thereby improving their moral and intellectual condition. Those drainings will also reclaim, and subject to the purposes of Agriculture, a large portion of the richest lands in the State. From the experiments which have been made by a few enterprising individuals, near Lake Phelps and Mattamuskeet, no doubt

exists, that our Swamp lands are more productive than any others. The draining of these Swamps, and of our Marshes, cannot be done by individuals. The State must lend its aid to effect it. In laying out the routes for Canals, in many parts of the Southern and Eastern Counties, it is probable the Principal Engineer can select routes which will answer the double purpose of Canals and Drains.

A primary part of the Plan of Internal Improvements contemplated by the Legislature, that part which is to give effect to all the others, is the employment of a Civil Engineer of Science and Experience to direct this great work. The Commissioners have employed such an Engineer from that country which, by Mr. Latrobe, is called "The Academy of Civil Engineers," where the Science of Civil Engineering has attained a perfection unknown in any other country.

Under his direction, the Commissioners hope, the Internal Improvements of the State will progress, with steadiness and judgment, until the wishes of the people on this subject shall be gratified, the resources of the State shall be developed, and her prosperity be established.

Submitted to Hamilton Fulton, Esquire, Principal Engineer for the State of North-Carolina.

A. D. MURPHEY, *Chairman, &c.*

10th August, 1819.

STATISTICAL TABLES

SHEWING

THE RESOURCES OF NORTH-CAROLINA,

ALSO THE

Amount of Direct Taxes, Internal Duties and Customs, received by the General Government from this State since the Year 1791.

STATEMENT

Shewing the Gross and Nett Amount of the Customs, together with the Amount of Drawbacks, &c. and expences of Collection, in North Carolina, from the commencement of the General Government to 1816, *inclusive.*

Years	Gross amount of duties on Merchandise, Tonnage, Fines, Penalties and Forfeitures	Drawback on Merchandize.	Drawback on Domestic Spirits Sugars, &c. Bounties and Allowances.	Expences of Prosecution and Collection.	Net Revenue.
	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.
1791	122,025 37	29 45	141 60	6.843 57	115.010 75
1792	85.648 60	160 98	383 89	7.040 97	78.062 85
1793	70,570 80	80 74	184 50	6.538 64	63.766 92
1794	87.521 05		305 72	8.419 01	78.796 32
1795	109,845 96	1,032 14	211 50	8.725 58	90.876 74
1796	89.774 44	10,4 1 32	681 76	9.922 21	68,749 15
1797	119.857 23	1 254 20	224 43	13,071 43	105,307 17
1798	142 030 21	5 804 12	529 59	14.715 33	120.989 17
1799	178 072 30	2,524 71	720 15	20,403 43	154,424 01
1800	159 502 51	4.555 08	993 60	27.492 56	126,461 27
1801	147.847 28	1.507 95	1,712 90	19,493 22	125,128 21
1802	287,068 64	2,742 38	3,053 69	28,895 25	252,397 32
1803	192.207 91	1,785 97	2.184 37	28,272 38	159,965 19
1804	216.172 75	3,754 68	2.353 33	23.424 78	186,639 96
1805	200,935 97	10,646 83	1.473 22	23,547 78	165.268 04
1806	230,685 45	2.011 56	1,232 77	25,085 89	202.055 23
1807	218 964 88	5,921 78	938	15,712 13	196,392 97
1808	51,894 05	2,390 22	291 15	32,294 19	16.918 49
1809	87.297 57			22.069 82	65,227 75
1810	81,425 39	4.185 55		18,993 71	58,246 13
1811	71,628 89	588 05		26,174 75	44,866 09
1812	65.204 69	880 75		18,003 43	46,320 51
1813	477.068 27	497 24		20.092 22	456,478 81
1814	378.229 30	480 15		32.655 86	345,093 29
1815	373.804 03	3,860 78		26,739 22	345,204 03
1816	287,704 48	15,084 46	12 00	28,185 71	244,422 31

STATEMENT

Shewing the Gross Revenues which accrued from the Internal Duties, from 1794, *to December* 1801.

Year.	Spirits and Stills.	Sales at Auction	Carriages.	Retailer's Licences.	Stamps.	Amount payable.
	Dlls. Cts.	Ds. Cs	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.
1795	16,086 14	477 57	1,679 00	1,368 12½		18,102 69½
1796	16,153 96	58 32	1,817 00	1,025 00		19,054 28
1797	27,814 61	199 76	3.695 41	1,175 00		32,884 78
1798	21 166 16½	102 31	4,030 35	2,115 00	5.801 89	32,215 71½
1799	34,756 25	239 40	4,534 91	2,755 00	6,264 01	48,549 57
1800	32,913 71	348 79	4.834 03	2,555 00	5.828 38	46,479 01
1801	18,174 90	372 43	5,005 48	2.320 00	6,603 42	32,476 23

STATEMENT

Shewing the Internal Duties which accrued in the Year 1814.

Licences for Stills & Boilers employed in distilling from domestic materials	Carriages.	Licences to Retailers.	Sales at Auction.	Stamped paper and Bank notes	Paid by banks in lieu of Stamps on Notes.
Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts	D ls. Cts.	Dlls. Cts.
87,738 22	14,147 44	23,985 00	1,237 62	9,132 80	1,865 94

STATEMENT

Shewing the amount of Internal Duties which accrued in 1815 and 1816.

	Licences for Stil's & Boilers employed in Distilling from Domestic materials.	Domestic materials at 20 cents per gallon.	Domestic materials at 25 cents per gallon.	Carriages.	Licences to Retailers.	Sales at Auction.	Stamped paper and Bank notes	Paid by Banks in lieu of Stamp Duties	Goods &c manufactured, &c	Interest & additions received on duties not punctually paid.
	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls Cts.	Dlls Cts.	Dlls. Cts.	Dlls Cts.	Dlls. Cts.	Dlls. Cts.
1815—	13,853 81	21,961 11	175,922 07	8,907 95	32,967 98	6,784 47	11,909 15	2,852 40	12,8 1 23	2,080 25
1816—	21,256 28	10,710 58	61,163 20	7,382 18	28,221 85	4,844 26	12,922 86	3,409 90	4,518 92	1,491 40

	U. States' moiety of Fines, Forfeitures & Penalties recovered.	Total Duties accruing.	Total Duties received by Collector.	Paid to the Treasurer.	Expences of Collection.	Household Furniture.
	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts	Dlls. Cts.	Dlls. Cts.
1815—	264 98	709,206 62	569,482 39	583,299 05	38,198 43	
1816—	17 18	161,482 78	219,903 42	227,956 82	13,567 94	5,404 74

STATEMENT

Of the amount of Duties which accrued on Manufactured articles from the 18th April, 1815, to the 22d February, 1816, being the period during which these Duties were in force.

Iron.	Nails, Brads & Sprigs.	Candles	Hats, Caps & Bonnets.	Paper.	Saddles & Bridles.	Boots & Bootees.	Wearing Apparel & Furniture.
D. C.	D. C.	D. C.	D. C.	D. C.	D. C	D. C.	D. C.
762 66	229 73½	11 45½	3,641 49	192 16	4,207 38	806 84	3 23

Tobacco, Segars, Snuff.	Leather.	Gold, Silver & Plated Ware.	Total amount.
D. C.	D. C.	D. C.	D. C.
690 82	4,934 01	459 91	15,989 10

STATEMENT

Of the payments made by North Carolina, on account of the Direct Tax, laid in 1798, 1813 and 1815.

Quota.	Amount of the Assessment.	Charges of Collection.	Payments in to the Treasury to the 30th Sept. 1809	Balance due 30th Sept. 1809.
Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.	Dlls. Cts.
Per act of 1798, 198,697 96	191,063 54	13,308 85	170,316 83	7,433 36
Per act of 1813, 220,238 28	220,959 92	15,774 52	206,460 42	1 07
Per act of 1815, 440,476 56		20,036 79	371,906 17	

COMMERCE OF NORTH-CAROLINA.

Statement of the value of the exports from North-Carolina from 1st October, 1790, to 30th September 1817.

Years	Dlls. Cts.	Years	Domestic Produce. Dlls. Cts.	Foreign Produce. Dlls. Cts.
1791	524,548	1803	926,318	26,996
2	527,900	4	919,545	9,142
3	365,414	5	767,434	12,469
4	321,587	6	786,029	3,576
5	492,161	7	740,933	4,229
6	671,487	8	117,129	
7	540,901	9	322,884	160
8	537,810	1810	401,465	2,484
9	485,921	1	793,975	4,001
1800	769,799	2	489,219	
1	874,884	3	795,510	1,848
2	659,390	4	362,446	
		5	1,012,967	975
		6	1,328,271	464
		7	955,211	1,569

STATEMENT

Of the value of Exports of Domestic Produce from each of the Ports of North-Carolina, during the year ending the 30th September, 1816.

	Dlls. Cts.
Wilmington,	1,061,112 00
Newbern,	84,281
Washington,	33,933
Edenton,	71,484
Camden,	12,982
Plymouth,	36,314
Ocracocke,	28,165
Total,	1,328,271

To Foreign Ports and probably ten times that amt. inland & coastwise to other States

Registered Tonnage of North-Carolina employed in Foreign Trade.

Years	Tons.	Years	Tons	Years	Tons	Years	Tons
1793	20,671	1797	19,645	1804	18,908	1811	17,114
1	23,245	8	18,693	5	22,576	2	15,243
2	26,844	9	19,214	6	22,180	3	14,807
3	10,167	1800	20,949	7	21,894	4	17,840
4	14,438	1	21,812	8	16,623	5	25,826
5	12,601	2	21,399	9	23,161	6	20,267
6	15,515	3	21,063	1810	26,472		

Vessels employed in *Foreign* trade, are registered by the Collectors of the district where such vessels belong, and certificates of registry are granted to the owners.

STATEMENT

Of the Enrolled Tonnage of North Carolina employed in the Coasting Trade.

Years	Tons.	Years	Tons	Years	Tons	Years	Tons.
1790	6,353	1797	5,651	1804	9,073	1811	10,794
1	7,269	8	5,700	5	9,086	2	12,869
2	6,976	9	5,147	6	9,091	3	12,334
3	2,764	1800	5,823	7	9,602	4	11,363
4	4,398	1	6,081	8	11,377	5	11,951
5	3,500	2	7,200	9	10,640	6	13,184
6	4,581	3	8,139	1810	10,562		

Vessels employed in the *Coasting* Trade must be enrolled or licenced by the Collectors of the District where they belong, and the enrolment or licence specifies the tonnage of the vessel.

STATEMENT

Of the Licenced Vessels under twenty Tons employed in the Coasting Trade.

Years	Tons	Years	Tons	Years	Tons	Years	Tons.	Years	Tons	Years	Tons.
1793	1,115	1797	1,914	1801	1,983	1805	2,420	1809	2,970	1813	2,936
4	1,737	8	1,913	2	2,004	6	2,471	1810	2,920	4	3,261
5	1,778	9	2,011	3	2,241	7	2,637	1	2,902	5	3,234
6	1,980	1800	1,947	4	2,239	8	2,860	2	2,916	6	3,103

COMMERCE OF THE CAPE-FEAR.

STATEMENT

Of the value of Exports of Domestic Produce from the Port of Wilmington, for six months, commencing 1st October, 1815, and ending the 31st March, 1816.

PRODUCE OF THE FOREST.	
Lumber, (Boards, hewn Timber, Staves, Shingles, &c.)	$157,200
Naval Stores, (Tar, Turpentine, Rosin, Pitch, &c.)	131,
PRODUCE OF AGRICULTURE.	
Live Cattle—Horses, Hogs, Bacon Hams, &c.	4.800
Wheat, Flour, Indian Corn Meal,	29,500
Rice,	48,000
Tobacco,	92.000
Cotton,	216,000
Flax Seed,	54.000
Produce Shipped Coastwise,	380.000
	1,112,500

SPECIES OF MERCHANDIZE.

23,650 Barrels of Tar.
1.100 do. of Turpentine.
22,500 do. Rosin.
400 do. Pitch.
100 do. Varnish.
250 Casks Spirits of Turpentine.
2,900 Bales of Cotton.
1,899 Hhds. of Tobacco.
220 Casks of Flaxseed.
1.320 Tierces of Rice.
5.560 Bushels, rough do.
3.250 Bbls. Flour.
9,660 Bushels Wheat.
62 Casks Bees Wax.
11 Hhds. Tallow.
150,000 Ft. Flooring Plank.
13,000 W. O. Hhds. Staves.

Abstract of Goods, Wares and Merchandize, of the growth, produce and manufacture, of the United States, exported from the Port of Wilmington, N. C. commencing the 1st of October, 1816, and ending the 30th of September, 1817.

Articles.		Quantity to Foreign Countries.	Quantity shipped Coastwise to other Ports of the United States.
Staves and Heading,	Thousands	2,804	15
Shingles,	"	14,424	172
Boards, Plank & Scantling,	M feet	4 931	195
Hewn Timber, (Pine)	Tons	1.753	54
Naval Stores—Tar,	Bbls.	3,975	22,053
Pitch,	"	607	2,633
Rosin,	"	26	1,534
Turpentine,	"	13,456	3,126
Beef,	"	426	
Pork,	"	16	
Hams and Bacon,	lbs.	12,016	43 boxes, 4 hhds 3 Tierces, 10 box. 756 Pieces, & 370 lbs.
Tallow,	"		13 bbls. 3 hhds, 8 casks and 1 tierce.
Lard,	"	20,293	
Wheat,	Bushels	4.338	820 Casks (of 7 bushels.)
Indian Corn	"	22 588	15,523
Flour,	Bbls.	6,341	3,941
Ship Bread,	"	434	
Rice,	Tierces	2,362	1092 tierces & 400 bush. rough.
Flax Seed,	Casks of 7 bushels	1,169	312.
Cotton,	lbs.	438 529	1 773 Bales.
Tobacco,	Hhds.	956	790 hhds. 7 bbls. 3 tierces & 11 kegs.
Bees Wax,	lbs.	1,600	1 hhd. and 10 bbls.
Spirits of Turpentine	gallons	4,492	218 barrels.
Varnish of do.			56 casks and barrels.
Feathers,			57 bales and bags.

The total value of Exports to Foreign Countries, comprising, besides the above, sundry domestic articles of minor importance, and a small amount of foreign Goods, during the year commencing the 1st October, 1816, and ending 30th September, 1817, was $713,961 48

A great variety of articles, not of the product of N Carolina, and some articles of produce of small importance, are omitted in this Abstract.

No returns being required from Collectors, of Goods shipped Coastwise, the articles are not particularly described, and the quantity and value are not specified in the Manifests delivered in by the Masters of Vessels

Vessels licensed for the Coasting Trade, going from one State to an adjoining State, are not required by law to enter or clear

☞ The Manifests of 14 vessels which cleared in the month of March, for different ports in the United States, being mislaid, are not included in the above.

STATEMENT

Of Domestic Produce boated from Fayetteville during the year ending 30th September, 1816.

Species of Produce.	*Value.*
2,337 hhds. Tobacco,	$400,000
8,292 bales of Cotton.	621,900
11,813 bushels of Wheat,	17,719
10,341 bushels of Corn,	10,341
5,164 casks Flaxseed	77,460
29,761 gallons Spirits	23,808
12,962 bbls Flour,	129,629
Tallow, Wax, Bacon, Furs, Lard, Feathers, &c.	50,000
	$1,331,398

In estimating the Prices, reference was had to the valuation at the Custom House, and to the New-York Prices Current of the proper date.

It is very difficult to ascertain correctly the quantity of Domestic Produce shipped from Wilmington, as great part of it is shipped Coastwise, and the Masters of Vessels engaged in the Coasting Trade are not required to specify in their Manifests either the quantity or value of Goods shipped. In the year ending 30th September 1816, there were boated from Fayetteville to Wilmington, for shipment, 2330 hhds. Tobacco. Yet the Books of the Custom House at Wilmington contain an account of only 1309 hhds shipped for that port. More than 1000 hhds were shipped Coastwise, of which no return was made to the Collector.

POPULATION.

Population of North Carolina at different periods.

A. D.	1753	1763	1790	1800	1810
	45,000	200,000	393,951	478,103	555,500

Census of North-Carolina in August, 1790.

Free White Males of 16 years and upwards.	Free White Males under 16 years.	Free White Females.	All other Free persons.	Slaves.	Total.
69,988	77,506	140,710	4,975	100,571	393,951

Census of North-Carolina in August, 1800.

FREE WHITE MALES.

Under 10 years.	Of 10 & under 16.	Of 16 and under 26 including heads of families.	Of 26 and under 45 including heads of families.	Of 45 and upwards including heads of families.
63,118	27,073	31,560	31,209	18,688

FREE WHITE FEMALES.

Under 10 years.	Of 10 & under 16.	Of 16 and under 26 including heads of families.	Of 26 and under 45 including heads of families.	Of 45 and upwards including heads of families.	All other free persons, except Indians, not taxed.	Slaves.	Total.
59,074	25,874	32,989	30,665	17,514	7,043	168,296	478,103

Aggregate amount of each description of persons within North-Carolina, agreeably to the Census taken in the year 1810.

FREE WHITE MALES.

Under 10 years of age.	Of 10 & under 16.	Of 16 and under 26 including heads of families.	Of 26 and under 45 including heads of families.	Of 45 and upwards including heads of families.
68,036	30,321	34,630	34,456	21,189

FREE WHITE FEMALES.

Under 10 years of age.	Of 10 & under 16.	Of 16 & under 26 including heads of families.	Of 26 and under 45 including heads of families.	Of 45 and upwards including heads of families.	All other free persons, except Indians, not taxed.	Slaves.	Total.
65,421	30,053	37,933	33,944	20,427	10,266	168,824	555,500

Names of the Counties.	Whites and other free persons not taxed.	Slaves.	Total.
Anson,	6506	2325	8831
Ashe,	3547	147	3694
Beaufort,	4635	2568	7203
Bertie,	5158	6059	11,218
Buncombe,	8582	698	9277
Burke,	9574	1433	11,007
Brunswick,	2524	2254	4778
Bladen,	3686	1985	5671
Cabarrus,	4924	1234	6158
Currituck,	5354	1631	6985
Columbus,	2319	703	3022
Craven,	7626	5050	12,676
Camden,	3936	1411	5347
Carteret,	3651	1172	4823
Chatham,	9342	3055	12,397
Cumberland,	6586	2796	9382
Caswell,	7458	4299	11,757
Chowan,	2508	2789	5297
Duplin,	5447	2416	7863
Edgecombe,	7316	5107	12,423
Franklin,	4836	5330	10,166
Guilford,	9953	1467	11,420
Gates,	3175	2790	5965
Greene,	3025	1842	4867
Granville,	7830	7746	15,576
Haywood,	2609	171	2780
Hertford,	3247	2805	6052
Hyde,	4177	1852	6029
Halifax,	8996	6624	15.620
Johnston,	4497	2350	6867
Jones,	2593	2375	4968
Iredell,	8540	2432	10,972
Lincoln,	13,870	2489	16,359
Lenoir,	3132	2440	5572
Moore,	5423	944	6367
Montgomery,	6734	1696	8430
Martin,	3630	2357	5987
Mecklenburg,	10,778	3494	14,272
Nash,	4371	2897	7268
Northampton,	5824	7258	13 082
New-Hanover,	5023	6442	11,465
Onslow,	4370	2299	6669
Orange,	15,434	4701	20,135
Person,	4069	2573	6642
Pasquotank,	5479	2295	7674
Perquimons,	4035	2017	6052

Pitt,	5580	3589	9169
Randolph,	9314	798	10,112
Rutherford,	12,233	979	13.202
Rockingham,	8202	2114	10.316
Robeson,	6188	1340	7528
Richmond,	5394	1301	6695
Rowan,	17,786	3757	21.543
Stokes,	9899	1746	11,645
Sampson,	4571	2049	6620
Surry,	8897	1469	10,366
Tyrrell,	2454	910	3364
Warren,	4722	6282	11,004
Washington,	2177	1287	3464
Wake,	11,208	5878	17,086
Wilkes,	7860	1194	9054
Wayne.	5931	2756	8687
	386,676	168,824	555,500

AGRICULTURE.

Quantity of Land and Number of Dwelling-Houses and Slaves, with their value as assessed for the Direct Tax of 1799.

LAND.		DWELLING-HOUSES.		SLAVES.
Number of Acres.	Valuation.	Number.	Valuation.	Number.
20,956,467	$27,909.479	11,760	$2,932,893	59,968

AMOUNT OF TAX ON

LANDS.	DWELLING-HOUSES.	SLAVES.	TOTAL.
$155,385 96	7,296 67	29.984	192,666 63
	Direct Tax of 1709	$192,666 62	
	Ditto of 1814	220,238 28	
	Ditto of 1815	440,476 56	
		$853,381 38	

STATEMENT

Of the value of Lands and Slaves in North Carolina, as assessed for the Direct Tax of 1815.

Congressional Districts.	*Value of Land*	*Value of Slaves.*	*Average value of Land per acre.*
Currituck,	$343.473	$348.858	$2 64
Camden,	412.618	315,721	3 55
Pasquotank,	496.342	352.262	4 25
Perquimons,	563.021	409.211	4 63
Gates,	544.444	574 944	3 37
Chowan.	645.360	577.364	6 66
Hertford,	830,081	675,486	4 18

	SECOND DISTRICT.		
Bertie,	1,350,096	1,297,362	3 88
Martin,	587,538	510,358	3 09
Northampton,	1,528 862	1,431.848	4 96
Halifax,	2,061.540	1,858,563	5 46
	THIRD DISTRICT.		
Washington,	437 512	292.171	2 50
Tyrrel,	332,014	221,955	2 72
Hyde,	818,287	489.800	2 89
Pitt,	1,399,719	880.548	3 94
Edgecomb,	1,926,572	1,455.450	4 84
Beaufort,	810,819	568.016	2 44
	FOURTH DISTRICT.		
Greene,	549,244	478,470	3 72
Craven,	1,787,931	977,391	3 84
Carteret,	385 131	265.225	2 43
Jones,	711.020	476.402	3 53
Lenoir,	724.993	586,328	3 63
Johnston,	846.865	595 965	1 79
Wayne,	1,144.620	602,231	3 52
	FIFTH DISTRICT.		
Warren,	1,045.425	1,285.937	3 60
Franklin,	916,718	979,908	3 32
Nash,	703.034	766.692	2 15
Granville,	1,161,446	1,664,855	2 64
	SIXTH DISTRICT.		
Onslow,	605.153	556,185	2 62
New-Hanover,	1,293,399	1,017,101	3 61
Duplin,	729,097	799,075	1 88
Sampson,	769,301	583.291	1 71
Brunswick,	516.189	468,947	1 17
Bladen,	554.276	558,619	1 26
Columbus,	167,964	382,012	85
	SEVENTH DISTRICT.		
Cumberland,	1,293,805	929,975	1 74
Robeson,	504,103	400,665	1 13
Montgomery,	519.637	446.184	1 24
Richmond,	463.992	382,038	1 56
Anson,	509,548	571,570	1 40
Moore,	359,029	227,680	1 11
	EIGHTH DISTRICT.		
Wake,	1.721,800	1,501.536	3 5
Orange,	1,917.993	1,216.647	3 25
Person,	511,745	661,892	2 41
	NINTH DISTRICT.		
Rockingham,	729,472	568.180	2 33
Caswell,	786,946	945.755	3
Guilford,	1,186.254	397,203	3 5
Stokes,	899,669	502,500	2 38

	TENTH DISTRICT.		
Rowan,	2,176,720	1,179,65	2 85
Randolph,	891.207	254 550	2 18
Chatham,	1.063 085	795,222	2 11
	ELEVENTH DISTRICT.		
Lincoln,	1,285,198	696,960	2 3
Mecklenburg,	1,309,334	944,864	3 20
Cabarrus,	640,274	299,216	3 41
	TWELFTH DISTRICT.		
Buncombe,	669,069	228,276	1 32
Haywood,	201,916	62,964	1 28
Burke.	840,481	422,389	1 34
Rutherford,	942,914	454,258	1 42
	THIRTEENTH DISTRICT.		
Surry.	841.226	335.243	1 60
Wilkes,	457,253	273,772	1 77
Iredell,	893.458	638,462	2
Ashe,	211.321	46.117	1
Total,	$53,521,513	40,667,314	

STATEMENT

Of the value of Lands in North-Carolina as assessed by the Proprietors for the State Tax of 1815.

Counties.	*Acres of Land.*	*Value.*
Anson,	322.574	$460,650
Ashe,	190,647	180,019
Brunswick,	436.864	378,630
Buncombe,	379,378	541,722
Beaufort,	293.886	360,600
Burke,	513,624	744.425
Bladen,	475,174	522,301
Bertie,	326,495	1,452,254
Craven,	460 820	662,922
Carteret,	135.242	265.788
Currituck,	132,904	254,432
Camden,	114.123	220.133
Caswell,	250,700	783,379
Chowan,	92,010	318,816
Chatham,	465.715	965,763
Cumberland,	672 747	818.830
Cabarrus,	152,562	496,739
Columbus,	220,595	191,238
Duplin,	404.265	479.443
Edgecombe,	393,225	1,610,903
Franklin,	266,212	822,740

Guilford,	365,490	1,042,704
Gates,	157,852	157,852
Granville,	409,422	1,157,859
Greene,	148,188	380,671
Halifax,	387,135	1,802,513
Hertford,	174 024	648,091
Hyde,	250.300	395.571
Haywood,	143.930	165,154
Iredell,	381.547	651,083
Jones,	258.027	602.786
Johnston,	470,348	763,252
Lincoln,	620.150	1,159.314
Lenoir,	205.372	280,970
Moore,	312,662	336,882
Montgomery,	324,968	392.635
Mecklenburg,	398,382	1,216,582
Martin.	178.742	518.592
New-Hanover,	341.535	241.538
Nash,	332,497	664.557
Northampton,	305.451	1,521,796
Onslow,	288,056	522,601
Orange,	526,622	1,651,742
Person,	198,963	478,460
Pasquotank,	108.825	283,228
Pitt,	317,564	976.152
Perquimons,	128.702	283,790
Rowan,	788,175	1,870,142
Randolph,	371.293	756,020
Rockingham,	293.150	664,886
Robeson,	601.584	480.119
Richmond,	291,592	266,914
Rutherford,	424,150	719,739
Sampson,	387,456	606,591
Surry,	441.092	664,317
Stokes.	407,282	368,809
Tyrrell,	149,170	251,599
Washington,	159,790	292,625
Wilkes,	246,920	386.347
Warren,	298,445	1,103.229
Wayne.	312,626	969.396
Wake,	551.099	1,486,301
	29,618,170	41,352,014

The following Table will shew the number of Militia in each County, and also the Population represented in the Congress of the United States; which population includes all the Whites and two fifths of the Blacks.

CONGRESSIONAL DISTRICTS.

Counties.	Federal Numbers.	Militia.
Currituck,	6,333	383
Camden,	4,783	555
Pasquotank,	6,776	652
Perquimons,	5,246	455
Gates,	4,849	520
Chowan,	4,182	388
Hertford,	4,930	640
	37,099	4,043
SECOND DISTRICT.		
Bertie,	8,795	787
Martin,	5,045	520
Northampton,	10,179	805
Halifax,	12,971	847
	36,990	2,957
THIRD DISTRICT.		
Washington,	2,950	327
Tyrrel,	3,000	394
Hyde,	5,289	595
Pitt,	7,734	889
Edgecomb,	10,0,381	1,080
Beaufort,	6,176	654
	35,530	3,939
FOURTH DISTRICT.		
Greene,	4,131	443
Craven,	10,656	899
Carteret,	4,355	400
Lenoir,	4,018	410
Jones,	4,596	349
Johnston,	5,955	908
Wayne,	7,585	682
	41,276	4,091
FIFTH DISTRICT.		
Warren,	8,492	598
Franklin,	8,034	725
Nash,	6,110	585
Granville,	12,478	1,145
	35,114	3,053

	SIXTH DISTRICT.	
Onslow,	5 750	585
New-Hanover,	8,889	671
Duplin,	6 899	677
Sampson,	5 .01	941
Brunswick,	3.877	311
Bladen,	4,877	479
Columbus,	2.741	5 2
	38.852	4,166
	SEVENTH DISTRICT.	
Cumberland,	8.264	1,151
Robeson,	6,992	896
Montgomery,	7,752	940
Richmond,	6,175	66 3
Anson,	7,001	1,050
Moore,	5 990	520
	43,074	5,226
	EIGHTH DISTRICT.	
Wake,	14.735	1.211
Orange,	18,255	1,941
Person,	5,613	670
	38,603	3.822
	NINTH DISTRICT.	
Rockingham,	9.471	1,072
Caswell,	10.038	932
Guilford,	10.834	1,191
Stokes,	10.949	1,242
	41,290	4,437
	TENTH DISTRICT.	
Rowan,	20.041	2,851
Randolph,	9.793	1.000
Chatham,	11.523	1.143
	41.357	4,994
	ELEVENTH DISTRICT.	
Buncombe,	8,999	1.249
Haywood,	2.712	357
Burke,	10.434	1,299
Rutherford,	12,811	1,601
	54 956	4,506
	TWELFTH DISTRICT.	
Lincoln,	15,364	1.895
Mecklenburg,	12,875	1,356
Cabarrus,	5,665	753
	33,904	4,004

THIRTEENTH DISTRICT.

Surry,	9,779	1,303
Wilkes,	8,575	951
Iredell,	10,090	1,274
Ashe,	3,636	492
	$31,990	4,020

REVENUES OF NORTH-CAROLINA.

The Revenues of North-Carolina are derived from

1. Taxes.
2. Dividends on Bank Stock.
3. Dividends on Navigation Stock.
4. Sales of vacant Lands.

The produce of the Taxes has varied from year to year, as the lists of taxable property, and the amount imposed upon each article, have been increased or diminished by the General Assembly.

The amount of Taxes paid into the Treasury, exclusive of the Tax on Bank Stock, was in

1801	$37,076 85
1802	42,624 04
1803	42,759 97
1804	47 094 75
1805	47,951 08
1811	59,207 10
1812	61,481 60
1814	68,803 92
1815	84,923 78
1816	87,568 84
1817	84,701 88

STATEMENT

Of the amount of Tax paid upon each article of Taxable property for the year 1817.

Lands.		Polls		Stores.		Town property.		Stud-Horses		Taverns		Pedlars.	
D.	C.	D.	C.	D.	C.	D	C.	D.	C.	D.	C.	D.	C.
35,528	16	32 027	64	5,531	78	1,834	25	1,282	12	109	85	2,735	84

Gates.		Billiard tables		Exhibition of Natural & Artificial curiosities		Negro Traders		Bank stock		Tavern Licences.		Total.	
D.	C.	D.	C.	D	C.	D.	C.	D.	C.	D.	C.	D.	C.
186	80	564		827	20	1,919	81	16,500		3,463		98,201	88

STATEMENT

Of the Amount of Taxes paid by each County for the year 1817.

Counties.	Amount paid.	Counties.	Amount paid.
Anson,	$ 904 02	Johnston,	$1,359 65
Ashe,	330 62	Lenoir,	1,159 28
Brunswick,	680	Lincoln,	2,069 02
Buncombe,	815	Montgomery,	852 70
Beaufort,	1,249 17	Mecklenburg,	2,014 52
Burke,	1,212 54	Martin,	1,066 94
Bladen,	899 54	Moore,	632 08
Bertie,	2,173 26	New-Hanover,	2,254 27
Caswell,	2,388 41	Nash,	1,252
Carteret,	479 62	Northampton,	2,381 47
Currituck,	723 60	Onslow,	851 49
Camden,	752 77	Orange,	2,988 28
Craven,	1,872 76	Person,	1,012 04
Chowan,	1,157 47	Pasquotank,	1,086 78
Chatham,	1,839 76	Pitt,	1,686 56
Cumberland,	2,718 04	Perquimons,	856 24
Cabarrus,	795 14	Rowan,	2,850 25
Columbus,	402 25	Randolph,	1,212 90
Duplin,	1,076	Rockingham,	1,256 15
Edgecombe,	2,623 59	Robeson,	921 24
Franklin,	1,534	Richmond,	762 17
Guilford,	1,648	Rutherford,	1,076 95
Gates,	993	Sampson,	1,080 73
Granville,	2,957	Surry,	1,271 89
Greene,	680	Stokes,	1,496 94
Halifax,	2,147 18	Tyrrell,	563 01
Hertford,	1,216 39	Wake,	2,963 82
Hyde,	765 59	Warren,	2,191 72
Haywood,	318 37	Washington,	776 66
Iredell,	1,414 62	Wilkes,	729 66
Jones,	997 59	Wayne,	1,410 92

2. REVENUE FROM BANK STOCK.

The State owns	
In the Cape-Fear Bank 1250 Shares, equal to	$125,000
In the Bank of Newbern 1250 Shares, equal to	125,000
In the State Bank of North-Carolina, 2500 Shares, equal to	250,000
5,000 Shares, equal to	$500,000

The Revenue derived from the Bank Stock, when the dividends are 8 per cent. will be as follows—

8 per cent. upon 500,000, is	$40,000
Deduct 4 per cent. paid to the State upon deferred Stock, say upon $100,000	4,000
Total annual Revenue from Bank Stock when the dividends are 8 per cent.	$36,000

3. REVENUE FROM NAVIGATION STOCK.

The State has subscribed of the capital Stock of the

Roanoke Navigation Company,	$25,000
Yadkin Company,	25,000
Cape-Fear Company,	15,000
Neuse Company,	6,000
Tar River Company,	8,000
Catawba Company,	6,000
Lumber River Canal Company,	20,000
Roanoke and Pamptico Company,	5,000
Clubfoot and Harlow Creek Company,	2,500
	$112,500

For this Stock, partial payments have been made, as they have been required by the respective Companies. No dividends have been made as yet, except one by the Cape-Fear Company, nor will they be made until the works of the Companies shall have progressed considerably. The Charters authorise dividends of 15 per cent.

If the State should be disposed to make her Navigation Stock a source of public Revenue, it will be found more productive than an equal amount of Bank Stock: But much time is required to complete Public Works, and this source of Revenue will not be productive for two or three years.

4. REVENUE FROM SALES OF VACANT LANDS.

The annual average amount derived from this source, may be estimated at $4,500

ANNUAL REVENUE OF THE STATE.

The Produce of the Taxes for 1817 being assumed as the probable amount of the Taxes for succeeding years, the annual Revenue of the State will be as follows—

From Taxes,	$98,201
From Dividends on Bank Stock,	36,000
From Entries of Vacant Lands,	4,500
Total,	$138,701

EXPENDITURES.

The disbursements at the Treasury amounted in the year

1800 to	$48.419 ..	1809 to	90.381 87
1801 to	57,718 87	1810 to	74,179 41
1802 to	82,895 40	1811 to	68,694 55
1803 to	57,682 67	1812 to	57.508 92
1804 to	62,055 93	1813 to	80,013 52
1805 to	83.499 20	1814 to	115 796 75
1806 to	63,955 90	1815 to	123,372
1807 to	61.250	1816 to	142 942 74
1808 to	61,561 70	1817 to	207,081 51

The demands at the Treasury were greatly increased during the years 1814, 1815 and 1816, by the late War. In the year 1817, the Treasury redeemed $61.781 of Paper Currency, and paid $62,000 to the Banks of Newbern and Cape-Fear in discharge of the debt which the State owed for Stock in those Banks.

Expenditures at the Treasury may be classed under two heads.

1. On account of the Civil List.
2. On account of the contingent charges of Government.

Disbursements on account of the Civil List for the year 1817, were as follow.

Legislative Department,	$28,762 98
Executive do.	2,526 32
Judiciary do.	13,891 40
Secretary of State,	1,145 12
Public Printer,	1,075
Treasury Department,	2,396 94
Comptroller's do.	1,177 57
Adjutant General's do.	807 44
	$51,282 77

The expences of the Judiciary Department will be increased $6,800 under the act of 1818—

Salary of Judges of Supreme Court,	$7,500
Increase of salary of Circuit Judges,	1,200
Salary of Reporter,	500
	$9,200
Deduct Salaries formerly paid Solicitors	2,400
Increase,	$6.800
This sum of	6,800
being added to the Civil List of 1817,	51,282
will make the total disbursements hereafter on account of the Civil List,	$58,082

The contingent charges vary from year to year, as the General Assembly authorize expenditures for particular objects—In the year 1818, there were large charges upon the contingent Fund. In the Comptroller's Statement for that year, they are arranged under the following heads.

Contingences	$ 2,768 28
Court Martial at Newbern	381 04
Mrs. J. A. Blakeley	400 00
Gen. Washington's Statue	3.160 00
State Bank for deferred Payment	6.393 74
Roanoke Navigation Company	2,500 00
Pensioners	340 00
Congressional Election	154 97
Presidential Election	14 20
Money burnt	61,781 29
Public Library	304 25
Bank of Cape-Fear	31,000 00
Land deficiencies	311 01
Sheriff's to settle	869 30
Cape-Fear Company	3,000 00
Bank of Newbern	31,000 00
Neuse Navigation Companies,	600 00
Inland Navigation,	5.050 00
Fire Proof Offices,	2,229 66
	$146.257 74

The largest sums paid out of the contingent fund for the year 1818, cannot be considered as permanent charges. Two items only, to-wit, money burnt and money paid to the Cape-Fear and Newbern Banks, make up the sum of $123,781 29.

The redemption of the Paper Money may be considered as charged upon the Contingent Fund, and creating an annual charge thereon of $16,000, (the net amount of Dividends on State Bank Stock at 8 per cent.) until the redemption be completed, which will be within the next five years.

The debt to the Banks of Newbern and Cape-Fear for Stock, has been paid; so that the Contingent Fund may be considered as discharged from $107,781 29, which were payable out of it in 1818.

This will leave $38,476 45 as the amount which will be payable out of that fund hereafter, supposing the expenditures to remain the same as in 1818—but the expenditures for Inland Navigation will be increased, and probably other items may be added. It will be safe, however, to estimate the Contingent Charges of Government hereafter, at $45,000; in which sum will be included all payments to be made for Navigation Stock.

REVENUE AND EXPENDITURE COMPARED.

The Revenue hereafter, supposing the Taxes to remain as they are, may be estimated at		$138,000
The Expenditures will be		
1. On account of the Civil List,	$58,000	
2. On account of the Contingent Charges of Government,	45,000	
		$103,000
Surplus of Revenue annually,		$35,000

VIEW OF THE FINANCES HEREAFTER.

According to the Report of the Treasurer, there were remaining in the Treasury on the 1st November 1818, and subject to be accounted for, the sum of	$125,234 58
Add the Revenue for the year 1818—say	138,000 00
	263,234 58
The Expenditures from 1st November 1818, to 1st November 1819, will be—say	103,000 00
Leaving in the Treasury on 1st Nov'r, 1819	$160 234 58
Add the Revenue for 1819	138,000 00
	$298,234 58
Deduct Expenditures for that year	103,000 00
Leaving in the Treasury on 1st November 1820	$195,234 58
Add the Revenue for 1820	138,000 00
	$333,234 58
Deduct Expenditures for that year	103,000 00
Leaving in the Treasury on 1st November 1821	$230,234 58
Add the Revenue for 1821	138,000 00
	$368,234 58
Deduct Expenditures for that year	103,000 00
Leaving in the Treasury on 1st November 1822	$265,234 58

This sum will be increased $35,000 annually, until the Paper money be redeemed; when the annual increase will be $51,000.

This View of the Finances shews what funds the State has at her disposal without increasing the Taxes.

Of the ability of the State to provide ample Funds for Internal Improvements.—What Funds she now has at command.

THE preceding Statistical Tables have been drawn up, to shew

1. The amount of revenue paid *directly* by North-Carolina to the General Government since the adoption of the Federal Constitution.
2. The physical resources of the State.

From these tables a very imperfect idea of the *actual* amount of revenue derived by the General Government from this State, can be formed: For more than two thirds of the imported merchandize sold in North-Carolina, are purchased in New-York, Philadelphia, Baltimore, Richmond, Petersburg, Norfolk and Charleston; and the duties upon this merchandize are paid at the Custom Houses of New-York, Pennsylvania, Maryland, Virginia and South-Carolina. There can be little doubt, that the revenue derived by the General Government from North-Carolina, since the adoption of the Federal Constitution, has exceeded twenty millions of dollars. This fact reminds us more sensibly than any other, of the humiliating condition of the State. Whilst we have thus liberally contributed to the support and the aggrandizement of the Union, how have we been viewed by the General Government, or by our Sister States? Have we not been uniformly treated with cold neglect by the one, and open contempt by the others? There is no citizen of the State, whose sensibility is not depraved, who has noticed the passing events of the times, and not suffered a severe mortification from the reflection that such has been our treatment. We have been considered the outcasts of the Union, whose virtue and intelligence gave no claim to the high honors of the Government, and whose integrity was unworthy of a share in its administration. We have planted a colony that has outstripped us in public distinction; we have ceded this colony, with its extensive territory, (now forming a distinguished State,) to the General Government; we have been an obedient and patriotic people; and what have we got in return? We have been honoured by the appointment of

one of our citizens to a Foreign Embassy[a]; of another to the Bench of the Supreme Court of the United States[b]; and of a third, as Comptroller of the Treasury[c]: We have had two miserable Light Houses erected, one at Cape Hatteras, the other at Bald Head, near Smithville; and two wretched Forts built, one at Beaufort, the other at Smithville. Out of the many millions which we have paid, not two hundred thousand have been expended for this State. What has been the cause of this neglect? It is to be found in the supineness and apathy of the State; in its want of pride and character. We are never thought of, until the election of a President of the United States is coming on; and then we are complimented for our *good sense*, our *stern Republicanism*, and devotion to the *good cause;* we are tacked to the Virginia Ticket, and we vote accordingly. When this Farce is over, we are laughed at for a few weeks, and no more remembered until the next election come on, and then the same Farce is acted over again.

De Witt Clinton, the present distinguished Governor of New-York, observes, in one of his Messages to the Legislature of that State. that "character is as important to States as it is to individuals; and the glory of a State is the common property of its citizens." To this we may add the common remark, which is no less true of States than it is of individuals, "that the man who knows not how to respect himself, will not be respected by others." North-Carolina has not, since the year 1784, cultivated a respect for hers lf, nor has she sought to acquire a character in the Union. She has remained careless and spiritless, until her citizens have formed not only political, but commercial and local feelings with the people of Virginia and South Carolina; feelings which have abstracted their love from North Carolina, and rendered them much more indifferent to her improvement and greatness, than to the improvement and greatness of those States. If this state of things be suffered by the General Assembly, would it not be better at once to surrender our Charter as an Independent State, and incorporate ourselves with Virginia and South-Carolina? It is certainly more honorable for us to form integral parts of our neighboring States, which are respectable & honorable, than to be mere contemptible appendages to them.

Why do we remain in this humiliating condition? No other cause has ever yet been assigned for it in the General Assembly, than that we are too poor to get out of this condition. A view of the resources of the State, will shew to any man of common sense, that this is only an apology to men for not doing their

[a] General Davie. [b] Alfred Moore. [c] John Steele.

duty; an *off-hand* excuse to weak and timid minds, that can be offered upon all occasions, whilst the true cause is to be found in the want of public spirit, of State pride, and of State feeling. States of inferior resources have rendered themselves not only great, but ornaments of this Republic; they have attracted the esteem of their own citizens and the admiration of foreigners—Why shall we "*not do likewise?*" Why shall a citizen of this State, when travelling in distant countries he be asked, Whence he is from? Answer, That he is from the United States, and be ashamed to say he is from North-Carolina? If the present generation be willing to bear this sad degradation of character, are they willing to entail it upon their children? A good name is a richer inheritance than property; and posterity will venerate much more, those who transmit to them renown and manly virtues, than those who transmit only lands and negro slaves. A conviction of the reproach which we suffer, and the want of encouragement to industry and enterprize, have driven from the State, a large portion of her most useful population. They have gone to meet more congenial souls in the Wilderness of the West, where they have reared up, within a few years, States that have already taken the lead of their Mother Country. Will not all our *useful* population soon follow them, if something be not done to make North-Carolina a desirable place of residence? Society owes its progress to the influence and example of a few individuals; and the loss of one man of enterprize, intelligence and virtue, is a greater loss to the State, than that of five hundred ordinary men. And it may here be asked, who are those who have lately left us? Are they not our most respectable Planters and Farmers, and our most useful Mechanics? Any man who travels through the State, and witnesses the emigration, will answer this question with feelings of sorrow.

Are we not able to improve our condition? We have as much territory as New-York; we have at least two-thirds of her population; we have a more genial climate, and our soil is little, if at all, inferior to hers. She has resolved to unite the Commerce of the Lakes with that of the Atlantic, by the way of the Hudson River; and to execute this Work at the expense of five millions of dollars. She has resolved to make three hundred and fifty-two miles of Canalling, and within the last two years has executed more than one half of the work; she has resolved to impose Taxes to raise the money; and notwithstanding the objections of stock-jobbers, of short-sighted politicians, and of (the most contemptible of all) electioneering Candidates for public favour, the people have paid

those taxes with promptitude, and now have the prospect of wealth, convenience and greatness, of which they had no idea when this great work was commenced. Is this State too poor to follow, at least in part, the example of New-York? It certainly is not.

It will be seen, by reference to the preceding Tables, that in the year 1815, the people of North-Carolina paid to the General Government more than nine hundred thousand dollars, for the Direct Tax and Internal Duties, and three hundred and seventy-five thousand dollars for duties on imported goods: and also paid eighty five thousand dollars for the support of their own State Government. More than a million of dollars were paid in that year for taxes, directly by the Planters, Farmers and Mechanics of the State. We all recollect that these taxes were paid with ease and with promptitude. It will be seen, by reference to the Tables, than in 1814, and 1816, the people of this State paid in each of those years, very large sums for taxes. These Tables illustrate clearly the resources of the State, and the large sums which can be commanded by the Government, without oppression to the people, whenever the situation of the country requires them.—Since the year 1816, we have paid for taxes, exclusive of the Custom House Duties, about eighty thousand dollars annually.

Few men have the courage to impose taxes; and any plan for Internal Improvements which is bottomed upon an increase of the taxes, light as they are, will not be likely to meet with success. This renders it necessary to enquire what resources are at the disposal of the General Assembly, for public works, without resorting to further taxation—These resources are

1. The surplus monies remaining in the Treasury.
2. The lands in the Cherokee Nation of Indians, within our Boundary.
3. The sum of $160,000 which the Banks of Newbern and Cape-Fear are bound to loan to the State during the continuance of their Charters.

When treating of the Finances of the State, a view was given of their present, and future probable condition, for several years. It is very desirable that the annual surplus fund in the Treasury could be increased, by fixing the land-tax at eight cents. It is very immaterial to the land holders whether they pay eight cents or six; but the difference which these sums yield at the Treasury is considerable: and one half of the people do not to this day know that the land tax has been reduced.

The extent of the country possessed by the Cherokee tribe of Indians, and lying within our boundary, is not well known, the limits having never yet been definitively fixed. But it is pretty certain that we own more than a million of acres, which are now in the possession of the Cherokees. The Map of Messrs. Price and Strother does not shew any part of this land Upon that Map, Pigeon River appears at almost the Western extremity of the State. Haywood Court-House is to the West of Pigeon River, and the dividing line, between the Whites and Cherokees, is fifteen miles to the West of that Court-House. From Haywood Court House to the South-Western extremity of the State, the distance is computed at eighty miles; but this distance is not well ascertained. Most of this country has lately been purchased from the Cherokees, and they are to surrender the possession by the first day of January next. When roads shall be made through this country, it will be found one of the most valuable sections of the State. On the various branches of the Highwassee, Tennessee, Tuckesegee and Oconeluftee Rivers, are found extensive bottoms, of equal fertility with the Valley of the Yadkin, in Wilkes, and of the Catawba, in Burke. There are extensive bodies of good uplands, having for their growth, Hickory, Post-Oak and Dogwood. A large portion of the country lies well for farming, and the adjacent mountains furnish an inexhaustible range for cattle. The climate is mild and healthy. If a judicious plan be adopted by the General Assembly for the sale of these lands, they will yield nearly a million of dollars. They are a rich treasure, and should be disposed of to the best advantage. It would be very unwise to hasten the sale of these lands. Let people become acquainted with them, let their value be fairly understood before they be brought into the market. If the General Assembly will cause a good road to be made from Haywood Court-House, through those lands, to the South-Western Boundary of the State, this part of North-Carolina will soon become well known. This road would immediately become the Great Highway from this State and Virginia, to the upper parts of Georgia and Alabama.

It is understood that the best gap for crossing the Blue Ridge, is at the head of Tennessee River, on the route towards Augusta. The Commerce of the Cherokee country will probably take that direction, and the convenience of the Augusta market will certainly add to the value of the lands.

The Banks of Newbern and Cape-Fear are bound by their Charters to loan to the State one-tenth part of their Capital Stock. The Charters have yet fourteen years to run, during

all which time the State can have the use of $160,000 from those Banks.

From this view of the subject, it will be seen, that the resources which the General Assembly have at their command, without resorting to further taxation, exceed a million of dollars. The question now arises, how ought those resources to be applied? If applied to Internal Improvements, to what specific objects, and how ought the expenditure to be apportioned?

Of the management and application of the Fund for Internal Improvements.

Until the Cherokee lands can be sold, the State should, from year to year, as the condition of the Public Works may require, make loans from the Banks; and pledge its faith that the proceeds of the sales of those lands shall be applied to the payment of these loans. The annual surplus money in the Treasury will be more than sufficient to pay the interest of a loan of half a million of dollars. The Banks will find ample reasons for making extensive loans to the State for Public Works.

1. The money loaned will be expended within the State.
2. The wealth of their dealers, and of the State at large, will be increased.
3. The great object, desirable to all, but particularly to the Banks, will be gained: We shall ship our own productions and have markets at home.

The Banks should make sacrifices to effect this last object. While their paper strays with our Commerce from Charleston to New-York, they will be embarrassed in their business, and, to use a common expression, *often put to their shifts.* When our Commerce shall be concentrated at home, we shall owe our debts at home, and be under no necessity of sending our Bank paper abroad.

The General Assembly should authorise the expenditure of an hundred and fifty thousand dollars annually. It would happen that one half of that sum would not be required within a particular year, and yet a much larger sum be required for the succeeding year. The writer of this Memoir is well convinced, that Public Works, which depend upon the Funds of private men, will not progress in North-Carolina; and that without very liberal appropriations by the General Assembly, most

of the Public Works, which have been commenced in the State, will be abandoned. He is well convinced of another fact, although some years ago he thought otherwise, that the State ought to be the sole proprietor of all the Public Works; that her Roads, her Bridges and her Canals ought to be the common property of her citizens; the great highways of the public, free to all who will travel them.

To what objects should the fund for Internal Improvements be applied? These objects are enumerated in the Instructions which have been drawn up for the Principal Engineer. The object which first claimed the attention of the Legislature, and that in which the people have the greatest interest, is the Improvement of our Rivers. To this object it is ardently hoped, liberal appropriations will be made at the ensuing Legislature. These appropriations should be made in aid of the Companies which have been incorporated. Without this aid, there is no Company in the State, except the Roanoke Company, that can entertain a hope of executing the works for which they were incorporated. These Companies were formed after the late War, during the full tide of business and speculation. Many of the subscribers have become insolvent, many have moved away, others are embarrassed, and all are slow to make payment. These Companies have received very little aid from the rich, independent men of the country.—Men who are *scuffling* for better times, are those who organised the Companies, and who have now the burthen of supporting them: A burthen that every day increases, as subscribers become insolvent, embarrassed or move away—The Roanoke Company will progress, because they are aided by eighty thousand dollars from Virginia and twenty-five thousand from this State; whilst the Yadkin Company, who require much more money to effect the objects of their incorporation, than is required by the Roanoke Company, are aided with only twenty-five thousand dollars from the public, and the Cape-Fear Company with fifteen thousand. The State has reserved the right of increasing her subscription in the Roanoke Company, to eighty thousand dollars; and it would be well to increase the subscription of the State to that amount in the Cape-Fear and Yadkin Companies. This increase of subscription would not enable the Companies to *complete* their Work; but with such aid, they could make great progress, and if the money were judiciously expended, they would do much public good. It is therefore proposed, that the State increase her subscriptions so that she shall hold

Of the Stock of the Roanoke Company,		80,000
Do.	Cape-Fear Company,	$80,000
Do.	Yadkin Company,	80,000
Do.	Catawba Company,	25,000
Do.	Neuse Company,	25,000
Do.	Tar River Company,	25,000

It is further proposed, that appropriations be made

To complete the Clubfoot and Harlowe Creek Canal.

For removing obstructions in Broad River.

For making a Canal from Roanoke to Tar River and then to the Neuse.

For making Roads across the Mountains and through the Cherokee Country.

For constructing such Public Works as may be found most expedient for bringing to the Cape-Fear, the Commerce of the Pedee and the Catawba.

When our Inlets shall be examined and plans formed for their improvement, let appropriations be made for that object; and let liberal appropriations be made for draining the Marshes and Swamps of the Southern and Eastern Counties.

It is not proposed that all these appropriations should be made at one Session of the Assembly: but that an act be passed.

1. For increasing the subscription of the State in all the Navigation Companies.
2. Appropriating a sum not exceeding $150,000 annually, for seven years, for Internal Improvements.
3. Out of this appropriation payments to be first made to the Navigation Companies of such Instalments as are called for during the year, and the balance to be expended, first in the making of good roads across the Mountains and through the Cherokee Country, and secondly in the execution of such other Public Works as the Legislature shall designate, or the Board of Public Works shall think, the Interests of the State require.
4. To form a Board of Public Works.
5. To place all the Public Works under the general superintendance of this Board, and under the immediate direction of the Principal Engineer—And that no further aid be given to any of the Companies, until they agree that the Works in which they are engaged, shall be placed under the general superintendance of the Board, and the immediate direction of the Principal Engineer.

This plan would give system to the Public Works of the State; and would ensure their speedy execution. Paltry appropriations will do no good: and why shall we wait ten years to complete a Work which can be completed within five? We can as easily appropriate $150,000, annually, as $25,000.

The difference will never be felt by the people; for it is not proposed to impose upon them any Tax to raise the money. The expenditure of $150,000 annually for seven years, upon objects of Internal Improvement, will give to North Carolina a new character and add an hundred millions to her wealth. If South-Carolina can expend $250,000 per year upon such objects, it is strange, indeed, if we cannot raise $150,000.

In this plan, and in every plan which may be submitted to the General Assembly, it is and it ought to be, a primary object, to aid the several Navigation Companies. They are destined to perish, and that quickly, without such aid. In the next place, let a few good roads be made across the Mountains, one to extend quite through the Cherokee Country—The people to the West of the Blue Ridge must necessarily depend upon land carriage; and their condition is entitled to peculiar consideration in any general plan of Internal Improvements. It is worthy of remark, that good Roads across the Mountains will not only accommodate our own citizens to the West, but will draw to our markets on the Yadkin and Catawba, a large portion of the trade of East Tennessee, and of several Counties in Virginia.

Of Roads across the Mountains.

The Yadkin and the Catawba become boatable within fifteen miles of the foot of the Blue Ridge. In planning Public Roads, Wilkesborough may be taken as the point on the Yadkin, from which they diverge in different directions across the Mountains. One Road runs to the North into the Counties of Grayson and Wythe in Virginia, passing the Blue Ridge at the Elk Spur Gap. Two Roads run to the West; one crossing the Ridge at Reddy's River Gap, passes by Ashe Court-House, and forking, it extends to the North-West into the Counties of Russell and Washington in Virginia, and to the West to Jonesborough in East-Tennessee. The other, called Horton's Turnpike, passes the Ridge at the Deep Gap, and runs through the South-Western parts of Ashe County, on to Jonesborough—another Road leads from Wilkesboro' to the South-West, passes Morganton, and crosses the Ridge at the Swanannoah Gap.—The Mountain can be easily passed at each of these Gaps; and if the Roads were good, the inconvenience of crossing the Mountain would be disregarded. The Roads have been badly laid out; they are badly made, and the population in many parts is too weak to keep

the Roads in even tolerable repair. All these Roads should be made at the public expense. It will not be necessary to make paved Roads: Such is the quality of the soil, that mere ditching on each side, and throwing up the earth in the middle, will make as good Roads as the public convenience requires. It is believed by those who have turned their attention to the subject, that contracts could be made for improving these Roads, in the way suggested, at less than one hundred dollars per mile, upon an average distance of an hundred miles. The Principal Engineer should lay out the route for each Road, and confine the ascent and descent within an angle of five degrees. This can be done at all the Gaps. He should make contracts for the Work, and attend to its execution.—When the Roads are made, the people should be compelled to keep them in a state of good repair. The Principal Engineer should appoint the Overseers and assign their hands. It will be very easy for the Board of Public Works to draw up a system of regulations upon this subject, which will ensure the repair of these Roads.

Any man who will look upon the Map, will at once perceive the extensive trade which thus might be concentrated at Wilkesborough: and these are improvements which will bring the trade of neighbouring States into our own, whilst they, at the same time, accommodate a large portion of our own population, who can be accommodated in no other way by a system of Internal Improvements. All these remarks apply with equal force to the extensive country to the West, the trade of which might be concentrated at the head of Navigation on the Catawba. From that point, run three Roads, one to the middle parts of East-Tennessee, by the way of the Yellow Mountain; another crossing the Blue Ridge at the Swannannoah Gap, passes Buncombe Court-House, and there forking, one prong takes the valley of French Broad River, passes the Warm Springs, and enters East-Tennessee at the Painted Rock: The other turns to the West and leads to Haywood Court-House. This is decidedly the best Road in the State, to the West of the Blue Ridge. It is much better than most of the Roads to the East of the Ridge; and it is said by men acquainted with the country, that it can be extended through the Cherokee Nation, quite to the South-Western Boundary of the State, and be made as good to the West as it is to the East, except at the point where it crosses the Blue Ridge near the Southern Boundary; and a hope is entertained that a good Gap will there be found as soon as the country can be explored. From the head of Navigation on the Catawba, a third

Road runs to the South-West into the county of Rutherford, along which much valuable trade will pass to the Catawba, when that River is made navigable.

There are two other Roads crossing the Blue Ridge, which claim the attention of the General Assembly. One leading from Buncombe Court House by the Saluda Gap, forms the great Highway to South-Carolina and Georgia, from the Western parts of this State, and Virginia, from Kentucky and the Northern parts of Tennessee. It is perhaps, the most public Road in North-Carolina; and a Traveller is astonished on reaching Buncombe Court-House, (called Morristown on the Map, but now called Asheville) to find people from six States in the Union, in the same Hotel. This is the Road along which the people of Buncombe and Haywood trade to Columbia and Augusta. They will find a market much nearer to them, when the Catawba shall be made navigable.

There is another Road leading from Buncombe Court-House to the South, into Rutherford County. The Mountain in this direction has three Gaps, Mill's to the West, Cooper's in the Middle, and Shelton's to the East. The Mountain is difficult to be passed, both at Mills's and Cooper's Gaps. Shelton's Gap is now in the direct route and is said to be much better; but accidental circumstances have heretofore prevented the Road by this Gap from being attended to. This Road is not so important in a commercial point of view as either of the other Roads which have been treated of; but merits attention, from the consideration, that it would open a communication between portions of our people, who, being separated by a high Mountain, are in a great degree strangers to each other.

Of the employment of a Principal Engineer.

The want of a Principal Engineer has caused the waste of an immense sum of money. When the Navigation Companies were first organised, hopes were entertained that an Engineer would be immediately procured; how these hopes were disappointed, year after year, has been heretofore shewn. The State agreed, that if individuals would subscribe the money, she would furnish an Engineer to instruct them in their proceedings and plan their works. The Companies being organised, and public expectation excited, it was thought to be adviseable to commence their operations, that the spirit for Improvements might be kept up. They had no man of compe-

cient skill to plan or lay out their works; most of the Directors had never seen a Canal or a Lock; none of them knew how a Canal should be made, nor how a Lock should be built; nor did they know how a River was to be sluiced. This was bad enough: But the evil soon became ten times worse. Directors and Stockholders thought upon the same subjects, and each soon began to form plans. In this, as in every thing else which people do not understand, every man had his own plan, and was continually complaining that his plan was not adopted. Directors disagreed, Stockholders divided and formed factions; no one had any confidence in the knowledge of another; and in this way, the Companies have gone on, spending their money, and quarrelling among themselves, until some have become disgusted, and all dissatisfied. There is no man who has witnessed the proceedings of the Companies, who is not thoroughly convinced that it is utterly impossible for the Public Works to progress, without having some man at their head of competent skill to plan, and firmness to execute. Each Company will save more money, annually, by confiding their works to such a man, than the amount of his salary. We rejoice that we have, at length, procured such a man; and it is hoped, that the General Assembly will place all the Public Works of the State under his immediate direction—When this is done, they will progress with judgment and economy.

Of the Boundary of the State to the West.

This State is bounded by South-Carolina to the South, from the Atlantic Ocean to the Chateaugy River; and thence by Georgia to the line of Tennessee. The Boundary-line to the South remained a subject of dispute with South-Carolina for more than forty years. It was finally settled a few years ago, by Gen. Montfort Stokes, Gen. John Steele, and Robert Burton, Esquire, Commissioners on the part of this State, and Governor Middleton, Gen. Blassingham and Doctor Blythe, Commissioners on the part of South-Carolina, assisted by Dr. Caldwell, of our University, and Mr. Blackburn of the University of Columbia. The thirty-fifth degree of North Latitude was to be the dividing line; but on reaching the Blue Ridge, it was discovered that this parallel of latitude crossed the Ridge at several places; and the Commissioners having discretionary powers, agreed to make the summit of the ridge, the dividing line. This line terminated on the Chateaugy Ri-

ver, at a point where Mr. Ellicott, who had been employed by the State of Georgia for that purpose, had ascertained the thirty-fifth degree of North Latitude crossed that River. He had here placed a rock, for the North-Eastern corner of the State of Georgia. It remained for us to settle definitively with Georgia, our Boundary, from this rock to the line of Tennessee. Until Mr. Ellicott d termined the thirty-fifth degree of North Latitude, Georgia claimed a large portion of the County of Buncombe, and erected a County by the name of Walton, in that quarter, and organised its civil administration. Many very unpleasant occurrences grew out of this act of Georgia, but they were all finally settled by Mr. Ellicott. During the present year, the Commissioners appointed by the two States have run and marked the line on the thirty-fifth degree of Latitude, to the point where Tennessee sets up a claim. This line has crossed the Blue Ridge in several places, leaving to one State large Coves at the heads of Rivers, which policy seems to require should belong to the other. The head waters of the Tugalo, the Chatahouchy and the Tururа, are left to North-Carolina, and the head waters of the Tennessee and some other streams are left to Georgia, with the Blue Ridge dividing them from all the rest of the State. The Commissioners had no discretionary powers to fix the Boundary any where else than on the thirty-fifth degree of Latitude. It would certainly be to the interest of both States to make the summit of the Blue Ridge the dividing line; and it would be desirable, if Georgia would accede to this proposition, to appoint the same Gentlemen, Jesse Franklin, General Thomas Love and James Mebane, Esquires, on the part of this State, to run and mark the line with the Commissioners of Georgia, on the summit of the Ridge.

Our Western Boundary remains yet to be settled with Tennessee. The difficulty upon this subject grows out of the Cession Act of 1789, when that act is applied to the country West of the Highwassee River. The Unica Mountain terminates at this River; it there loses its distinctive name. The act of Cession declares that the line shall run from the Unica Mountain "along the main ridge of Mountains to the Southern Boundary of the State." In 1789, this part of the country was almost unknown, except to the Indians and to Hunters. Tennessee now alleges that there is no "main ridge of Mountains" west of the Highwassee, which crosses the Southern Boundary of this State: That there is a ridge on the East of Highwassee, extending from the Unica Mountain to the Blue Ridge, and that this Ridge must be pursued, otherwise we shall find no

Ridge which will lead to the Southern Boundary. This Ridge is evidently *lateral* to the main Ridges of Mountains, and is only a Spur of these main Ridges. If the claim of Tennessee be well founded, we shall lose the most valuable part of the Cherokee Country; that part which is watered by the head branches of the Highwassee River. The claim of Tennessee is in opposition to the understanding of people acquainted with that part of the country, ever since the act of Cession. It is very desirable that this claim be adjusted and the Boundary settled as quickly as possible.

Of our Sea Coast, and the formation of Alluvial Lands.

An opinion is entertained by many men who have attended to the physical history of our Globe, that the quantity of its waters are constantly diminishing. This opinion is founded on observations which have been made upon narrow seas, and the Lakes and Rivers of Continents. The waters in the Sea or rather Gulph of Bothnia, have been ascertained, by a long series of observations, to subside, regularly, between three and four feet in every century. The Lakes of Continents have been observed gradually to lessen in size, and the water in Rivers to diminish in quantity, as the forest is cleared away, and the climate ameliorated by the cultivation of the soil. From the regular subsidence of the water in narrow seas, where accurate observations can be made, an opinion is entertained, that a like subsidence takes place in the Oceans with which those narrow Seas are connected. From what causes this subsidence takes place, whether from an actual diminution of the waters of the globe, or from the gradual deepening of the bed of the Ocean by the agitation of its waters and the force of those strong currents which sweep across in different directions, is not material to the present subject. It is very evident, that from the Gulph of Florida to the Chesapeake, a tract of country extending sixty miles, generally, from the Ocean, is of very recent formation. In North-Carolina, great part of this country is not yet elevated fifteen feet above the level of the Ocean, much of it, not ten feet. This part of the continent is evidently extending itself to the East; it is checked in its progress by the Gulf Stream, and subjected by this stream to continual changes. It is further subject to change by the constant accumulation of alluvial earth, brought down

our Rivers and deposited near their mouths. The change produced by this cause upon our Coast is not so rapid, and therefore not so much noticed, as on the coasts of narrow Seas which have little or no tides.

Major Rennell, in his work on "the Geographical System of Herodotus," has explained the formation of the Delta of Egypt; and in this explanation, has illustrated the general principles of alluvial formations. His observations on this subject will be found interesting to those who are acquainted with our Coast, and have noticed its changes. His observations are as follow.

"No doubt when we carry back our ideas to the time when the sea washed the base of the rock, on which the Pyramids of Memphis stand, the present base of which is washed by the inundation of the Nile, at an elevation, most probably, of seventy or eighty feet above the surface of the same sea, we are lost in the contemplation of the vast interval of time, that must necessarily have elapsed, since the foundation of the Delta was first laid. But, appearances speak too clear a language to be misunderstood; and we are borne out in the supposition that the Delta has been formed piece meal, by a process which we shall now endeavor to describe—The following may accordingly be taken, as a specimen of the progress of Alluvion; and which may be seen in all the different stages of the process, at the mouth of any large River that deposits rapidly and plentifully.

"All Rivers preserve, to a certain extent of space, which is proportioned to the velocity of their streams, a current of water into the sea, beyond the points of land that form their Embouchures; when by the continued resistance of the sea, they at last lose their motion. The mud and land suspended in these waters during their motion, are deposited when that motion ceases; or rather, they are gradually deposited, as the current slackens, according to the gravity of the substances that are suspended. This deposition, then, will form a bank or shallow, in the sea; and which will be of a Fan-like shape, consistently with the form, in which the water of the River disperses itself. This bank is of very considerable breadth, and of course, is constantly on the increase in heighth, as well as extension; and the additions made to its breadth will be on the side towards the sea. Until the bank rises up near to the surface, the river water which is poured continually into the sea, escapes freely over it; but when the bank has risen so high, as to inclose the water in a kind of Lake it is then compelled to force its way through the bank; al-

though the passage will be both narrow and shallow, whilst the bank remains under water. This passage is technically named a Bar; for such it is, in respect of the channel of the River, although it be the deepest part of the entrance to it.

"The position of this opening through the bank, will be regulated by the direction of the stream of the River, at its termination in the sea; and this direction again, by the prevalent motion of the sea along the coast; the mouth of the River always falling obliquely into the line of the sea current. Accordingly, when the River enters the sea obliquely, the bar will be at one side of the bank; and on that side which is the farthest down, in respect of the sea current. But if the River enter the sea, in a line perpendicular to its shore, the opening or bar will be through the middle of the Bank.

"As the bank rises to the surface, the opening increases in depth and width, until it becomes absolutely a continuation of the course of the River; since its waters require the same breadth and depth to escape here, as in the upper parts of its course. And thus the upper part of the bank becomes gradually a portion of the firm land, whilst the outer part goes on accumulating, and the bar is gradually removed further out; in effect, there will be a repetition of the same order of things. And hence it will clearly appear, that the bank thus laid in the current of the River, is, in reality, the germ of the growing alluvion.

"The bars are usually swept away every season, by the periodical flood: which, although it cannot rise to a higher level than the sea, is increased in velocity, by the increase of the body of water, above; and also by that of its descent: as the flood swells to a greater height above, and therefore forms a slope towards the sea. These floods also bring the greatest addition to the growing alluvion; and not unfrequently, change the direction of the channel, and with it, of course, the position of the bar; their depositions being laid farther out in the sea, by reason of the greater velocity of the current.

"Having endeavored to explain the mode in which the alluvion gains on the sea, we shall next endeavour to explain the manner in which the changes and modifications of the existing alluvions are wrought.

"The alluvions thus formed in the sea, are, in their original state, flat, and are also on a level with the ordinary surface of the sea; but as the surge repels that part of the deposited matter, which rises to the surface, it will be raised somewhat above the level: and as this agency has regularly operated on all the new-made alluvion, it must have formed one con-

tinued level, but for the interposition of the periodical floods, which have formed it into a regular slope, corresponding with their own.

" As the alluvion then, is extended into the sea, so is its level gradually raised into a slope: an operation that is constantly going forward, but which cannot keep pace with the extension, because every addition to it occasions a deficiency in the slope.

" Until the new formed alluvion was considerably raised, it must have partaken very much of the character given it by Herodotus; who says, that in ancient times, ' The whole of Egypt, except the province of Thebes, was one extended marsh; and when the Nile rose to the height of eight cubits, all the lands above Memphis were overflowed.' These traditions clearly point to a state of things that had existed, although probably at a period too remote to be fixed: For there must have been a time when the Delta was not only a marsh, but was even covered with water; and when the sea must have advanced so near to the scite of Memphis, as to allow the annual flood to rise no higher than eight cubits, or twelve to fourteen feet at that place. Herodotus remarks, that it rose fifteen or sixteen cubits in his time; which was the natural progress of things, as the point of contact of the land waters, and those of the sea was removed further out.

" So long as the alluvion of the Delta remained in the state of a marsh, the waters of the Nile, through the want of declivity to carry them off, and the pressure of the sea water from without, when the River was low, may be supposed to have formed a tissue of Canals, interspersed with Lakes and Marshes—But when the land began to acquire some solidity in the upper parts of the Delta, Canals, in the nature of drains, would be formed by the hands of man, and Dykes raised along the banks of Rivers, in order to exclude the redundant waters from the appropriated lands. And this is probably the period referred to by Herodotus, when he describes ' the vast and numerous Canals by which Egypt is intersected;' and which he attributes to Sesostris. He was also told that the same Prince made a regular distribution of the lands of Egypt, assigning to each Egyptian a square piece of ground: and that his revenues were drawn from the rent which every individual annually paid him.

" As the land rose by depositions, the waters would naturally confine themselves to fewer channels; since the land in a firmer state, would require a greater force to divide it. At a time when the upper part of the Delta had acquired a degree

of firmness and elevation, we learn from Herodotus, that three natural channels conveyed the waters of the Nile to the neighborhood of the sea : a quarter in which the alluvial land must ever be regarded as in an imperfect state of formation. At present, two only convey those waters to the same quarter, during the season when the River is not swolen ; and one of these is growing shallow—Can it be doubted, then, that a Delta is (comparatively speaking) land in an imperfect state of formation ; that the natural progress towards completion, is that of the Rivers, confining itself to fewer channels : and that the inundation, from being a complete mass of water, spread uniformly over the country, becomes merely an overflowing of the River, extending to a certain distance, and forming the country adjacent to each bank into a slope of several miles in breadth, of which the highest part is the crest of the bank itself, from the circumstance of its depositing more sediment near the bank, than at a distance from it ?—But as long as the alluvion continued too flat to communicate a sufficient velocity to the River, when in its low state, it would continue to separate itself into many different streams, although one of them would probably surpass all the rest in bulk. On the above principles, then, as the greater slope extends itself downwards, the Delta ought to retire from it ; or in other words, the River, in its course through the high level, should flow unique ; and the base of the Delta should gradually contract ; and this satisfactorily appears to have been the case."

These observations of Major Rennel explain the manner in which the Southern and Eastern parts of this State have been formed ; and they will aid us in forming opinions as to the future probable condition of the Inlets on our Coast. This subject has received new illustrations from Monsieur Prony, Director General of the Public Works of France. Some time ago, he visited Italy by direction of the late Emperor, to view the Pontine Marshes near Rome, and report upon the practicability of draining them. Whilst in Italy, his attention was also directed to the Rivers of that country, particularly the Adige and the Po. He published an Essay upon the alluvions of the Rivers of Italy, which Monsieur Cuivier has annexed to his work on the Theory of the Earth. This Essay contains facts and reasonings which will be found highly interesting to men engaged in public works, on a coast that is affected by alluvions.

FINIS.